

### PROCESS SPECIFICATION

ERA AVIATION INC.

GULF COAST DIVISION LAKE CHARLES, LOUISIANA

PROCESS SPECIFICATION NO. 4009
APPLICATION OF URETHANE PAINT
FOR FINISH COAT

$\bigcirc$	DATE
Prepared By: Care Mushy	5/10/20
Approved By Dave Murph Engineering:	out The
Quality Control: <u>Care Mars</u>	hy 5/10/1
Production:	***

Mark Jones

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		E	RA PROCES	SS	SPECIFICATION		

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ERA I	PS	4009	REV	IR	DATE	GE 1 OF 4  5/15/90 .
1.	SCOPI This sp materia	ecification establishes t	he procedures for	application of u	rethane paint finish to	o composite
2.	<u>MATE</u> 2.1	Reducer T0001	g of: Converter G3010 Temp. below 77 Temp. above 77	St. I	South 21st Street Louis, Missouri 63103	3-3092
	2.2					
	2.3	Dupont (Imron) 2 part system consistin Imron base colo Activator 192-5 Reducer 8485-5	or 8125 k Houtor	oont De Nemour Kempwood Dr. n, Texas 77255		
3.	CAUT AVOI WARI	ARATION  TON - AVOID BREAT  D REPEATED CONTA  NINGS SHOWN ON M  T. (SEE APPENDIX B	CT WITH SKIN. ANUFACTURE	OBSERVE AL	LL PRECAUTIONS A	AND
	3.1 3.2 3.3	Prepare surface to be paint.  Mask areas to be paint.  Prepare paint in accord	ainted by wiping ed as required by	applicable draw	ing, E.O., etc.	pendix A)
4.	APPL	<u>ICATION</u>				

### **ERA PROCESS SPECIFICATION**

4.1

Apply paint to composite component in accordance with technical data sheets shown in Appendix "A".

					A. 6	AGE 2 OF 4
ERA F	'S	4009	REV	IR	DATE	5/15/90 .
	4.2	Observe drying ti	mes and time between	coats. See Tech	nnical Data Sheet. (A	ppendix A).
5.	REQU	JIREMENTS				
	5.1	Uniform covering	g of material; free of r	uns and sags.		
	5.2	Minimum dry film	n thickness per manuf	acturer's specific	cations. See Appendi	х A.
	5.3	Lay down a strip previous layer. A	ss test can be accompli of foil, and add 1/2 of after paint has dried th ckness requirements.	another strip of:	foil, from the same ro	oll, on top of
	5.4	After system has locations.	dried 24 hours check	adhesion using p	ressure sensitive tape	at random

				PA	GE 3 OF 4
ERA PS	4009	REV	IR	DATE	5/15/90 .
		APPEN	DIX A		
		Manufacturer's I			
		U.S. Paint - Tempo Paint - DuPont -	Alumigrip 4600 Series Imron		
			•		
4					
		ERA PROCESS S	PECIFICAT	ION	

Induction Time After Mixing: 15 minutes Anticipated Pot Life @ Standard Conditions:

Anticipated Cure Time @ Standard Conditions: 24 hours to tape free; 7 days to full cure

### Anticipated Cure Time When Accelerated

Temp. (°F.)	Reducer	Accelerator	Dry Time (Hrs.)	Application Life (Hrs.)
100	T0002	None	18-20	6-8
90	10003	X-138*	3-4	2-3
		X-98**	1-2	1-2
80	10003	X-138	4-5	4.5
		X-98	2-3	1-2
70	T0003	X-138	11-12	6-7
		X-98	4.5	2.3
60	EGGOT	X-138	12+	6-7
		X-98	5-7	3-4

"X-138: 1 liquid dunce per 2 gallons of catalyzed AWLGRIP: before adding reducer "X-98: V2 liquid ounce per 2 gallons of catalyzed AWLGRIP: before adding reducer.

Application Temperature Limits: Temperature should be between 60°F, and 90°F, during application. Lower temperatures will retard curing.

### Surface Preparation

Surfaces should be clean, dry and free from all contaminates. Exact surface preparation requirements are dependent upon the type of

Service Temperature Limits: 150°F, continuous; 225°F. intermittent. Higher temperatures may cause yellowing.

### Mixing Ratio by Volume:

### SPRAY

Mix one part AWLGRIP® Topcoat Base with one part AWL-CAT #2 Converter G3010. Reduce to spray viscosity 17-20 secs. in a #2
Zahn Cup @ 77°F., 50% R.H. with T0003 or
T0001. Temperatures above 77°F, require
reduction of 20-25% with T0003 Reducer.
Temperatures below 77°F, require reduction of 20-25% with T0001.

### Recommended Film Thickness:

5 Mils Wet 2-3 Mils Dry

Theoretical Coverage (Sq. Ft./Gal.): 690 Square Feet @ 1 Mil Dry 225 Square feet @ recommended film

thickness per mixed gal.

### Suggested Primer Systems

AWL-QUIKTM #545 Epoxy Primer, 30-Y-94 Primer, or Hi-Build Epoxy Primer

SILKSCREEN
Mix 4 fl. oz. (Vzc.) M3043 SMOOTH-SILKTM
with 1 gal. AWLGRIP\* Topcoat Base. Mix two
parts of SMOOTH-SILK modified AWLGRIP\* Topcoat Base with 1 part AWL-CATTM #3 Converter H3002.

### Recommended Film Thickness:

3 Mils Wet

1-11/2 Mils Dry

### Theoretical Coverage (5q. Ft./Gal.):

900-950 Square Feet @ 1 Mil Dry 400 Square Feet @ recommended film thickness per mixed gal.

### BRUSH

Mix two parts AWLGRIP Topcoat Base with one part AWL-CAT #3 Converter H3002. Reduce to brush viscosity with up to 20% AWLGRIP® Reducer T0031.

Film Thickness/Coverage: Same as SILKSCREEN.

Due to the chemical variations present in plastics, refer to the U.S. Paint Plastics Bulletin for detailed application procedures. Plastics covered in that bulletin include acrylic sheet, polycarbonate, polyethylene, ABS, ALUCOBOND, SMC, LUMIFLEX, polypropylene.

### Application instructions

### CONVENTIONAL SPRAYING

Use Binks or its equivalent: Pressure Pot System: Model #62 spray gun Fluid nozzle #63B Fluid needle #363A Air nozzle #63PB Siphon or Cup Gun System: Model #62 spray gun Fluid nozzle #66 Fluid needle #365 Air nozzie #665H Pressure pot gauge should read 8-12 pounds and 55 pound atomization at the gun. AIRLESS SPRAYING

Use Binks or its equivalent: Model #43 spray gun 9-1170 tip Orifice Size .009-.011 Spray angle of 70° or 8" fan On a 25:1 pump, the pressure gauge should read 30-40 pounds.

### SILKSCREEN

CAUTION! Test all screens for solvent resistance. The solvent base of AWLGRIP® will attack certain screen materials. If silkscreening over clear acrylic sheet, PLASTIGRIP additive may be required. Refer to U.S.P. Plastics Bulletin. Apply AWLGRIP® in the same manner as traditional silkscreen inks.

The most successful field technique is to work two painters simultaneously, shoulder to shoulder. One rolls the topcoat to a film thickness of two-three mils wet (1.0 mils dry) with a short nap (1/2" or less) mohair or urethane grade foam roller. The other applicator feathers the rolled topcoat brushing

vertically.

When brushing the AWLGRIP® Coatings
Systems the following technique can help
protect your fine badger brushes and provide the smoothest application:

- 1. Brush all surfaces whenever possible vertically. Vertical brushing minimizes the residual brush marks and aids in the cleaning of the finished surface.
- Two brushes should be used simultaneously during application. The second brush should be placed in a container of Brushing Reducer T0031 when not in use.

- After applying AWLGRIP® for approximately 30 minutes, the first brush being used should be thoroughly cleaned and placed in the container of Brushing Reducer T0031.
- 4. The second brush should be removed from
- the solvent, dried, and used to continue the AWLGRIP® coatings application.

  5. Constantly change, clean, and dry alternating brushes to prevent the curing of the AWLGRIP® Coatings Systems in the heel of the brush.
- 6. For optimum results, AWLGRIP® urethanes should be brushed using the techniques employed when varnishing. Always start from the dry surface and brush into the wet

### PROBLEM SOLVING ADDITIVES:

Accelerators (73015)X-138	r
(73014)X-9	3
Anti-Crater Solution	
CRATER-XTM	
Flattening Agent	3
GRIPTEXTM Non-Skid Particles fine 7301:	2
Coarse 7301:	
PLASTIGRIPTM Adhesion Promoter M305	
SMOOTH-SILKTM Silkscreening Agent M304	3
SPATTER—ITTM Texturing AdditiveM304I	3

### Recoatability—Normal

Can be recoated without sanding within 36 hours. If recoat takes more than 36 hours, sand lightly with 280 to 320 grit production paper or use SCOTCHBRITE® between coats. Clean with AWL-PREP" after sanding.

### Recoatability—Accelerated

Can be recoated without sanding between 18-36 hours. If recoat takes more than 36 hours, sand lightly with 280-320 grit production paper or use SCOTCHBRITE® between coats. Clean with AWL-PREP!" after sanding.

Equipment Cleaning Clean spray equipment, brush or roller with Reducer T0003, T0001, T0031, or T0002.

Safety\*
CONTAINS ALIPHATIC POLYISOCYANATE DANGERI VAPOR AND SPRAY MIST HARMFUL MAY CAUSE LUNG IRRITATION AND ALLERGIC RESPIRATORY REACTION IRRITATES SKIN AND EYES FLAMMABLE Gives off harmful vapor of solvents and isocyanates (a hazardous material). DO NOT isocyanates (a hazardous material). DO NOT USE IF YOU HAVE CHRONIC (LONG-TERM) LUNG OR BREATHING PROBLEMS, OR IF YOU HAVE EVER HAD A REACTION TO ISOCYANATES. USE ONLY WITH ADEQUATE VENTILATION. WHERE OVERSPRAY IS PRESENT, A POSITIVE PRESSURE AIR SUPPLIED RESPIRATOR (TC19C NIOSH/MSHA) IS REQUIRED WITH APPROVED AIR SUPPLY.

Follow directions for respirator use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone.
Wear eye protection and impervious clothing and equipment. Exposure controls may require the use of a NIOSH/MSHA approved combination vapor/particulate or air supplied respirator.

Do not breathe vapor or spray mist. Do not get in eyes or on skin. Keep away from heat (sparks) and open flame. Keep closures tight and upright to prevent leakage. Keep container closed when not in use. In case of spillage, absorb and then dispose of in accordance with local applicable regulations.

For Professional Use Only

FIRST AID: If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing physician and have label information available. In case of eye contact, flush immediately with plenty of water for 15 minutes; call a physician. In case of skin contact, wash thoroughly with soap and water. \*WARNING!

If specific color contains lead as indicated on its label, DO NOT USE ON TOYS, FURNITURE, OR SURFACES OR OTHER ARTICLES WHICH MIGHT BE CHEWED BY CHILDREN. WASH HANDS THOROUGHLY AFTER USING AND BEFORE SMOKING OR EATING.

IMPORTANT! This product must be blended with other products prior to use. Read all warnings and precautions on the labels of all products being blended as the combination may contain the hazards of each component.

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### PAINT AND VARNISH CO.

DIVISION OF TOWER CHEMICALS LIMITED

PAINTS - VARNISHES - PUTTIES - LACQUERS - AIRCRAFT AND INDUSTRIAL FINISHES 205 FENMAR DRIVE . WESTON, ONTARIO M9L 2X4 . 746-2233

### Specification Data

4600-Durathane High Gloss Enamel consists of:-4600-Durathane Base and 4600-Durathane Catalyst

DESCRIPTION:

Gloss, hard, weather and chemical

resistant aliphatic polyurethane.

COLOUR:

As specified.

APPLICATION LIFE:

8 hours at 77°F at approximately

50% relative humidity.

MIXING RATIO:

l part Base with l part Catalyst

by volume.

REDUCING THINNER:

4600-S-1 as required. of MILT 8,772.

SPRAY VISCOSITY:

19-21 Seconds, #2 Zahn cup.

INDUCTION TIME:

15-30 Minutes.

RECOMMENDED

FILM THICKNESS:

1.5 to 2.0 mils dry.

DRY:

To tape 12 hours at 77°F at approximately

50% relative humidity.

APPLICATION:

Apply a light coat followed by a full wet

coat to give a wet film thickness of 3-4 mils. May be applied by airless or

conventional spray equipment.

### DURATHANE 4600-C-1 GLOSS CATALYST

CATALYST IS SENSITIVE TO MOISTURE AND MUST BE KEPT IN TIGHTLY CLOSED CONTAINERS. IF CATALYST TAKES ON A MILKY CAST IT SHOULD NOT BE USED AND SHOULD BE DISCARDED. EACH COLOUR IN THE DURATHANE 4600 LINE HAS ITS OWN CATALYST. I.E. BLACK CATALYST SHOULD NOT BE USED WITH WHITE BASE.

The information presented herein, while not guaranteed, is to the best of our knowledge true and accurate. No warranty of guarantee express or implied is made regarding the performance of any product, since the manner of use is beyond our control. No suggestion for product ues, nor anything contained herein, shall be construed as a recommendation for its use in infringement of any existing patent, and Tempo assumes no responsibility or liability for operations that do infringe any such patents.

### "IMRON" POLYURETHANE ENAMEL

2291956 00-5-08)

CODES AND COLORS:

MIXING MACHINE FORMULATED COLORS TO MATCH A WIDE VARIETY OF VEHICLES; COMMERCIAL, AVIATION, MARINE AND FLEET COLORS.

CHORAL

USAGE AND SUBSTRATES:

"IMRON" CAN BE USED OVER ANY PROPERLY PREPARED SUBSTRATE, SUCH AS FIBERGLASS, GEL-COAT, STEEL, ALUMINUM AND GALVANIZED. "IMRON" CAN BE USED OVER ALL O.E.M. ENAMEL FINISHED VEHICLES OR OVER "IMRON" ITSELF.

"CORLAR" EPOXY PRIMER AND PRIMERS: MULTI-PURPOSE PRIMERS ONLY.

APPLICATION:

THREE PARTS "IMRON" TO ONE PART 192-S ACTIVATION:

> ACTIVATOR (NOT OPTIONAL). POT LIFE - 6 TO 8 HOURS.

REDUCTION: UNDER NORMAL CONDITIONS, NO REDUCTION IS

REQUIRED. IF RETARDER IS NECESSARY, USE

8485-5 UP TO 15% BY VOLUME.

18 TO 22 SEC. (DU PONT M-50 VISCOSITY CUP). VISCOSITY:

8485-S "IMRON" REDUCER TO INCREASE FLOW SOLVENTS:

AND LEVELING.

189-S (OPTIONAL) WILL REDUCE TO TAPE CURE ACCELERATOR:

TIME PROVIDING A HARDER FILM SOONER.

(4 OUNCES TO ONE GALLON OF "IMRON")

- 50-60 P.S.I. "AT THE GUN" SOLID COLORS AIR PRESSURE:

METALLIC COLORS - 60-65 P.S.I. "AT THE GUN"

8 TO 10 INCHES. • GUN DISTANCE:

TWO COATS (SOLIDS) COATS:

THREE TO FOUR COATS (METALLICS), OR MORE

AS REQUIRED.

DUST FREE - 15 TO 30 MINUTES DRYING TIMES:

HAND DRY - 2 TO 3 HOURS WITH 189-5

500-S "IMRON" CLEAR ENAMEL. • TOPCOATS:

• SPECIAL FEE: 259-S ONLY

### LIMITATIONS:

• DO NOT USE "IMRON" OVER O.E.M. LACQUER OR AIR DRY REFINISH LACQUER PRODUCTS.

• CLEAN ALL EQUIPMENT AS SOON AS POSSIBLE AFTER APPLICATION IS COMPLETED.

(SEE CABEL FOR ADDITIONAL PRODUCT INFORMATION AND SAFETY PRECAUTIONS)



### IMRON" POLYURETHANE ENAMEL

USE: A high-gloss, extremely durable, chemical and solvent-resistant, air-dry material both in solid and metallic colors for use on aircraft, commercial vehicles, fleets, passenger cars and other applications where exposure to severe conditions exists.

**DESCRIPTION:** A multi-component product consisting of a pigmented base and activator. Companion products are an optional Dry Time Accelerator 189 S, 259 S Imron\* Additive for fish-eyes and 8485 S Imron\* Reducer.

**PERFORMANCE DATA:** Excellent color and gloss retention, chip resistance, abrasion resistance, stain and mar resistance. Excellent chemical and solvent resistance. Outstanding resistance to yellowing. Excellent cleanability, Optional faster drying rate.

% SOLIDS BY WEIGHT: 47.5% as mixed. (This is an average value which will vary with color selected.)

% SOLIDS BY VOLUME: 34.0% as mixed. (This is an average value which will vary with color selected.)

DRYING RATE: Tape free: @ 77°F., 50% Rei. Humidity: 6-10 hours without accelerator. 2-4 hours with accelerator.

THEORETICAL COVERAGE: 544 sq. ft. at 1 mil. (This is an average value which will vary with color selected.)

RECOMMENDED FILM THICKNESS: 1.8 to 2.2 mils dry film thickness.

POT LIFE: 8 hours minimum at 70-75°F.

FLASH POINT: Below 80°F.

**DIELECTRIC STRENGTH:** Approximately 2 kilovolts per mil over steel, 8 kilovolts per mil over fiberglass for solid colors. Metallics have much lower values.

**REDUCTION RATIO:** Mix three parts IMRON Polyurethane Enamel with 1 part 192 S Activator. Four ounces per gallon 189 S Accelerator can be added to increase drying rate. 1/4 to two oz/gallon of 259 S Imron® Additive should be added to prevent fish-eyes. For spraying of large areas material may be reduced further with 8485 S Imron® Reducer or 8100 S Retarder.

### APPLICATION:

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For complete details refer to Imron\* Application Brochure, E-28268.

- Treat bare metal with Du Pont's recommended metal treatment system. Bare fiberglass should be scuffsended and solvent wiped with 3812 S Enamel Reducer.
- Follow with CORLAR\* Epoxy Primer, For aluminum, magnesium or fiberglass substrates use 824S light gray or 825S red oxide. For steel surfaces, use 825S red oxide. (CORLAR\* must be activated with 826S). Multi-Purpose Primer 100 S/110 S may be used as a repair primer under IMRON on previously painted surfaces.
- 3. OEM finishes (except facquers) and aged alkyd or acrylic enamels should be cleaned with 3919 S PREP-SQL\* or 3929 S PREP-SQL II\* and sanded thoroughly with #360 wet or dry sandpaper. Small bare areas can be primed with Multi-Purpose primer surfacer.
- For solid colors spray a medium first coat. Allow to tack up and follow with full second coat.
- 5. For metallic colors apply a light medium coat as a tack coat. Allow to set up 20 minutes, then apply a second light medium coat. Then reduce 15% with 8485 S (17-18 seconds #2 Zahn Cup) and apply third light medium coat. If desired, another light medium coat of reduced meterial may be used.
- Both solid and metallic colors can be clear coated with imron\* 500 S Clear.

### RECOMMENDED SPRAY EQUIP.:

			Fluid & Air		Retaining
Type	Brand	Model #	Nozzies	Needle	Ring
Siphon	Binks	7 =	36 x 36 SD	33	
	Devilbiss	MBC510=	30	EX	
ੀ ressure	Binks	= 7 *	33B x 33P	33	54-704
	Devilbiss	MBC510∓	704	FX	MBC368
Airless	Nordsen	Versagun™		06C11	
For equivalent				(.015 Restrictor)	

(over)

RECOMMENDED AIR PRESSURE:

Type

Pressure at Gun

Pot Pressure

Siphon

50-55 lbs, for solids 60-65 lbs, for metallics

Pressure

60-70 lbs.

10-15 lbs.

Airless

2000 psi

### RECOMMENDED SPRAYING VISCOSITY:

20-22 secs. #2 Zahn Cup for solid colors.

17-19 secs. #2 Zahn Cup for metallic colors.

### SAFETY PRECAUTIONS: WARNING!

FLAMMABLE, BREATHING OF VAPOR MAY CAUSE IRRITATION, CONTAINS LEAD, DRIED FILM OF THIS PAINT MAY BE HARMFUL IF EATEN OR CHEWED.

Contains ester solvents.

Keep away from heat, sparks and open flame. Avoid prolonged or repeated breathing of vapor or spray mist and contact with eyes and skin. Keep container closed when not in use.

FIRST AID: In case of skin contact, flush with plenty of water, for eyes, flush with plenty of water for 15 minutes and get medical attention. If affected by inhalation of vapor, remove to fresh air. If swallowed, CALL A PHYSICIAN IMMEDIATELY, induce vomiting,

### KEEP OUT OF THE REACH OF CHILDREN. USE ONLY WITH ADEQUATE VENTILATION.

Do not apply on toys and other children's articles, furniture, or interior surfaces of any dwelling or facility which may be occupied or used by children. Do not apply on those exterior surfaces of dwelling units, such as window sills, porches, stairs, or railings, to which children may be commonly exposed.

IMPORTANT: WHEN MIXED WITH 192 S, MIXTURE WILL HAVE HAZARDS OF BOTH COMPONENTS. OBSERVE ALL APPLICABLE PRECAUTIONS.

### DANGER!

VAPOR AND SPRAY MIST HARMFUL
MAY CAUSE LUNG IRRITATION AND ALLERGIC RESPIRATORY REACTION.
MAY IRRITATE SKIN AND EYES.
FLAMMABLE.
HARMFUL OR FATAL IF SWALLOWED.

Contains aliphatic polyisocyanates and ester solvents.

Use only with adequate ventilation.

If engineering and administrative controls of air contaminants are not feasible, wear an air line respirator (TC-19C NIOSH/MESA, or equivalent) during application and until work area has been exhausted of all vapor and spray mist. If air line respirators are not feasible and the atmospheric concentration of monomeric isocyanates is less than 10 times the allowable time weighted average, wear a vapor/particulate respirator (TC-23C NIOSH/MESA, or equivalent) recommended by the manufacturer for use with isocyanate vapors and mists. Individuals with chronic respiratory problems or prior allergic respiratory reaction to isocyanates must not be exposed to vapors or spray mist containing isocyanates.

Avoid breathing vapor or spray mist, Avoid contact with eyes and skin. Keep away from heat, sparks and open flame. Keep container closed when not in use. Do not transfer contents to bottles or other unlabeled containers.

FIRST AID: If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician. In case of skin contact, wash thoroughly with soap and water; for eyes, flush immediately with plenty of water for at least 15 minutes and call a physician. If swallowed, CALL A PHYSICIAN IMMEDIATELY. Induce vomiting.

IN CASE OF: FIRE—Use water spray, foam, dry chemical or CO2. SPILL—Absorb and dispose of in accordance with local regulations.

KEEP OUT OF REACH OF CHILDREN.

				Ρ.	AGE 4 OF 4
ERAPS	4009	REV	<u>IR</u>	DATE_	5/15/90 .
		APPEN	IDIX B		
		Material Safety	Data Sheets for:		
		T0001 1	· Alumigrip at Base Converter G3010 Reducer Reducer		
		4600 Dura 4600 C	600 Series thane Base Catalyst Reducer		
		Imron B 192-S A	ron ase Color Activator Reducer		

FOR COATINGS, RESINS, AND RELATED MATERIALS

DATE OF PREPARATION -- 10-31-1985 R. 07-14-85

MANUFACTURER U S PAINT DIVISION OF GROW GROUP, INCORPORATED 831 S. 21st Street 81. Louis, Missouri 63103 RUFORMATION (314) 621-0525 EMERGENCY (314) 621-0525 PRODUCT CLASS MODIF ILO ACE-72IC RESIN THADL MANE FOXFIRE* BRIGHT ALUMINUM METALLIG URETHANE TOPCOAT CODE.
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INGREDIENT   INGREDIENT   INGREDIENT   INGREDIENT   INGREDIENT	mmandy of same at mark		DIES IS		
GATE 23 5 1000  1 100 1000  12 150 150  13 100 5000  1 100 2000  2 100KS 5 1000 NA 18	INGREDIENT (COMMON MAME) (CHEMICAL NAME)	WEIGHT	ACGIIH TLV (PPM)	OSHA PEL (PPM)	YAPOR PRESSURE (mm Hg)
12 150 150 150 151 1811TS 3 100 500 400 400 200 2	CELLOSOLVE ACE LA TE 2-ETHOXYETHYLETHANGATE	82	νô	100	_
HEITS 3 100 500 400 400 PT 100 200 2 2 100 NA FE	XYI <del>ene</del> Dimethyl benzene	**	50	\$	2
# 100 500 # 400 460 1 100 200 OMS 5 100 NA F	NORMAI BUTYL ACETATE BUTYL ETHANOATE	12	150	150	10
4 400 400 1 100 200 NA F	PETROLEUM DISTILLATES UDORLESS MIMERAL SPIRITS	m	100	805	œ
t 100 200 OMS 5 100 NA F	ETHYL ACLTATE ETHYL FTHANOATE	*	400	400	98
OMS 5 140 NA	TOLUÉNE METHYL BENZENE	**	100	200	ន
	PETROLEUM DISTILLATES ALIPHATIC HYDROCARBOMS	vo.	100	Z.	3

Values given are in mg/M

NA - Nol avatlable NE - Not established

Care should be taken when sandling pigmented paints. Airborne nuisance particulates have an ACGHFTLY of tolat dust 10 mg/M²

This material does not contain untritionally added ingrectionts which are based on compounds of antimody, arsenic, cadmism, lead, mercury, selentum, or water soluble barium.

### SECTION III -- PHYSICAL DATA

WEIGHT PER GALLON 8.87 Ibs

VOLUME PERCENT VOLATILE 53

BOILING RANGE 165°F - 395°F

EVAPORATION RATE - Slower Ban Ether Heavier than Air VAPOR DENSITY ...

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

### VAPORS MAY CAUSE FLASHFIRE DANGER! -- FLAMMAB! &

FLASH POINT 24"F TGC

LEI. \$ 20

EXTINGUISHING MEDIA - Dry Chemical or foam

UNUSUAL FIRE AND EXPLOSION HAZARDS — Keep away Irom haal sparks. non-explosion-proof electrical equipment, during use and unu all vapors are gone. Vapors may ignite explosively. Vapors may spread forg distances and beyond closed doors. Prevon! and Hame Do not smoke Extinguish all pilot lights and furn off all sources of ignition, including healers, lans, and other

build up of vapors by maintaining a continuous flow of fresh au.

SPECIAL FIREFIGHTING PROCEDURES — Self contained breathing apparates with a full facepiece operated in pressure-demand or other positive pressure mode. In case of fire, use CO<sub>4</sub>, Dry Chernical Foam, or other approved method for treating a Class 8 fire. Summon professional trefighters.

### SECTION V - HEAL TH HAZARD DATA

### EFFECTS OF OVEREXPOSURE (ACUTE)

EYES Can cause severe arritation, redness, tearing,	and blurred visiop.	SKIN Protonged of repeated contact can cause moderate		SREATHING Excessive inhelation of vapons can cause pasal	and respiratory unitation, desciness, weakness,	latigue, mausea, headache, possible unconscious-	Gess, and even asphyuation.	SWALLOWING IMGESTION IS HARMFUL and can cause a burging	seasabon, nausea, vominno, and diarrhea
ess, tearing,	i,	an causa moderale	15,	an Calese nasal	SS, Weakness,	Die unconscious-		an cause a bureing	diarrhea

# ADDITIONAL EFFECTS OF OVEREXPOSURE (CHRONIC)

- -Protonged and repealed breathing of spray mist and/or sanding dust
  - over a period of years may cause diseases of the lungs.
    - Can cause irritation to mucous membranes.
- -Inhalation of concentrated vapous causes intoxication resembling that from alcohol.
  - --Lassitude, loss of appetite, and a bad laste may be noted at high concentrations.
- -frgestion may cause drowsiness and in severe cases pulmonary edema -Hemorrhages into various vital organs have been noted.
  - -- Mild allergen
- -May cause Injury to kidneys and liver. -Narcotic effects have boon noted.

tional everexposure to solvents with permanent brain and nervous system damage. Intentional rususe by deliberately concentrating and mhaking the contents may be harmful or fatal.

WARNING! Harmful or fatal if swallowed. Harmful if inhaled or absorbed through skin Overeposure may cause blood disorders. Based on tests with taboratory animals, order-spoodure may cause reproductive disorders and birth delects.

PRIMARY HOUTE(S) OF ENTRY (A) SKIN (X) BREATHING (X) SWALLOWING

ISI AID:

IN CASE OF SKIN CONTACT.

Wash area thoroughly with soap and water. Remove solied clothing. Get medical assistance if irritation persists. Wash clothing before reuse.

Flush with large amounts of water for at least 15 minutes. Cet medical assistance

IN CASE OF EYE CONTACT.

SWALLOWED: GET MEDICAL ATTENTION IMMEDIATELY.
DO NOT induce varieng.

Application of material into tungs can cause chemical pre-umonities which may be fatal

IF JUHALED.

If you experience difficulty in breathing, leave the area to obtain fresh art. If confinued difficulty is experienced, seminor medical assistance immediately. If breathing classes, restore using approved CPR techniques, and summon medical help immediately.

SECTION VI - REACTIVITY DATA

The second secon

HAZARDOUS POLYMERIZATION -- CAB not occur.

STABILITY - Stable.

MATERIALS TO AVOID

Excess heat and/or oxidizing materials

In addition. Chlorosultonic and

HAZARDOUS DECOMPOSITION

May decompose rate fumes containing carbon monoxide and carbon dioxide

When heated to decomposition emits toxic fumes.

SECTION VIII - SPILL OR LEAK PROCEDURES

SMALL SPILL Absorb inquid on mert material such as paper, vermiquifie,

Roor absorbent, and transfer to accord

LARGE SPILI, Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be exchided from area of spill until clean up has been completed. Stop spill at source, contain area of spill to prevent spreading, pump liquid to salvage hank. Remaining liquid may be absorted with inert materials such as sand, clay, earth, or floor absort-enf, and shovefed nito containers with non-sparking liquid.

If run-off occurs, notify the proper authorities as required that a spull has occurred.

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### WASTE DISPOSAL METHOD

Allow vofstife portion to evaporate in hood being sure to allow sufficient time for vapors to comptetely clear hood duct work. Dispose of confaminated absorbent, container and woused combails in accordance with local, stately and event are guild to not inconerate closed confamers.

### SECTION VIII — PROTECTIVE EQUIPMENT

### VENTILATION/RESPIBATORY PROTECTION

Use only with adequate rentilation, Maintain continuous flow of fresh air. Do not breathe vapors, spray mists, or sanding dusts. Wear appropriate, properly fitted respitator, fullOSH/MSSHA approved) during and after application unless air monitoring demonstrates vapor, mist, and particulate levels are below applicable limits. Follow respirator manufacturer's directions for respirator use. Expinenting or administrative controls should be implemented to propression or distinctions.

Provide sufficient mechanical (general and/or focal exhaust) ventifation to maintain exposure below  $\Pi_{\nu}V(s)$ .

### PERSONAL PROTECTIVE EQUIPMENT

Do not get in eyes, on skin, or on clothing. Use solvent resistant safety eyewess with splash guards. Solvent impermeable gloves, colliting, and boots are recommended to prevent skin contact.

# SECTION IX - SPECIAL PRECAUTIONS AND ADDITIONAL COMMENTS

Keep closure light and upright to prevent leakage. Keep contains closed when not in use. Do not store above 120° F. Do not transfer contents to boilies or other unlabeled containers.

Containers of this material may be hazardous when emplied because they relain product residues (vapor, tiquid, and/or solid). All hazard precautions given in this data sheet must be observed.

### IMPORTANTE

This product may be blended with other products prior to use. Read all warnings and precautions on the labels of all products being being delended as the combination may contain the hazards of each component.

### NON-WARRANTY

The information presented herein, while not guaranteed, is to the best of our knowledge frue and accurate. No warranty or guarantee expressed or implied is made regarding the performance of any paroduct, since he manner of use is beyond our control. No suggestion for product use, nor anything contained herein, shall be consitued as a recommendation for its use in infringement of any a sisting patent, and Grow Group assumes as responsibility for experience.

### FOR INDUSTRIAL USE ONLY

By professional, trained personnel using proper equipment. Not intended for sale to, or use by, the general public,

FOR COATINGS, RESINS, AND RELATED MATERIALS

02-26-1990 DATE OF PREPARATION -

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SECTION

U.S. PAINT CORPORATION MANUFACTURER

831 S. 21st Street

St. Louis, M.D 63103

13141 621-0525 INFORMATION

CHENTREC --- 1-800-424-9300 EMERGENCY MODIFIED POLYISOCYANATE RESIN PRODUCT CLASS TOPCOAT CONVERTER FOR SPRAY APPLICATION TRADE NAME

63010 (92-C-39) AWL-CAT 6 #2 3000

### SECTION II - HAZARDOUS (MGREDIENTS

	WAPE NESSUE (= 1922°C)	1330-20-7	141-78-6	188-86-3	111-15-9	26182-51-2 0
	JAHAATIEN UKsa (PPAJhr)	\$50005	>8000/4	\$00D/4	1588/8	FE NA
	20 Pg.	4,3(2)	5.6(2)	5,0(2)	\$\$. 150	GIURET OF 1,4 NEXAMETHYLENE BRISDGYANATE G.G2** NA MA NE MA
	25 SE	ME	¥	¥	>-	M.ENE I
[cas #]	C17673 ASRIA TP TE	쏉	#¥	3408	HANGATE Ae	EXANE THE
[CA	STATE PELE LINGTS SOILA DERIA SIEL EER IN	BENZEN	ANDA 1E NA	HZENE BS#	THYLET	1,6 H
WAME ]	75 E 52	DIMETHYL BENZENE 100 xx0	ETRYL ETHANDATE 480 NA	FEINT BERZENE 280 150	2-ETHDXYETBYLETHANGATE 1GO NE RE	GIURET OF
ICAL D	E LIBETT SEDS RESIS- RATEGR	ЯЕ	38	표	<b>*</b>	놸
[CHEMICAL NAME]	: Transational Lingi i Qsal skib ii per resign	103	១០៩	200	160	0.02
Ē]	# # (PPP)	150	*5	3,	ace fate Ne	IPHATIC POLYISGEYANATE 0.02°° ya
COMMON NAME]	108534 1087344 (1983)	ENE 100	HYL ACETATE	UENE 100	SCELEDSOLVE ACETATE  S NE	718 20LY 0.02~
COM		1) XYLENE	¥.	1>701.UENE 1	) CEL	AH 91

NAP - Not Applicable NE -- Not Established RA -- Rot Arealsable N --- No -- Acute first 1056 Rabbit -- Acute Dret to50, Rat -- Berral LOSO Rabbit -- Berral LOSO Ret 383 (4) A... As recommended by manufactures (A) - 5NR# 313 REPOJEMBLE (A) - 5NR# 313 REPOJEMBLE (A) - Ecntains a 544% 313 reportable \* Values given are in mades \*\* Yalues given are in ug/A

Percent may yary due to the diskilletion process

- Centeans a SARA 313 reportable material which may include sylene,

toluene, and ethyldensen

This majorial does not contain intentionally added ingredients which are based on compounds of antimony, arsente, cadminm, lead, mercury, setenium, or water soluble banium.

### SECTION IN - PHYSICAL DATA

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BOILING HANGE 168\*F - 362°F

VOC OF MATERIAL 592 gms.A.

**VOLUME PERCENT VOLATILE 64** 

EVAPORATION RATE - Slower than Ether Hazyfer Baan Aig VAPOR DENSITY ---

# SECTION IV — FIRE AND EXPLOSION MAZARD DATA

7

### DANGER! - FLANMABLE VAPORS MAY CAUSE !! ASH FIRE

### FLASH POINT 24°F ICC

### Dry Chem cal or Foam **EXTENGUISHING MEDIA**

Do and smoke. Extinguish als pitol lights and turn off all sources of ignition including hausers, fans, and other non-explosion proof electincal equipment, during use and until all varions are gone, Vapors may ignite explosively. Vapors may soread long distances and beyond closed Keep away Irom heat sparks, and flame doors. Prevent build up of vapors by maistaining a continuous flow of fresh air UNUSUAL FIRE AND EXPLOSION HAZARDS

Jacepiece operated in pressure-demand or other costuve pressure mode. In date of fire, use CO., Ory Chemical, Foam, or other approved method for treating a Class 9 fire Summon SPECIAL FIREFIGHTIMG PROCEDURES — Self confained breathing apparatus with a tuff professional firefighters.

and full protective clothing. During a tire, isocyanale vapors and other irritating. If git-y rowc gases may be generated by thermal decomposition or compusition. Closed container may explode when exposed to extreme heal or burst when contain mated with water [GQ], evolved. Personnel who are lighting iscouringe lives should wear self ir ontained breathing apparatus

### SECTION Y - HEALTH HAZARD DATA

### EFFECTS OF OVEREXPOSURE JACUTE,

EYES	Liquid, aerosols or sapors of the product are virialing and can cause learning residence, burned asson, and swelling accompanied by a singing sensation and maybe a beving the that of fine dust in the beyon the research with site mortain and in stream and in stream and can cause inguisation. Symptoms of site in militarion symptoms of site in militarion and in a first ordinary site in grash, scaling or historing. So years and penetrate the skin causing
<b>BREA</b> THING	effects similar to inches potentined subder about breathing symptoms. Some persons may develop syn is stantial from syn conflact. Cured material is difficult to remove stantial from syn conflact. Exceeds may also from our apports can cause may also required with an our apports can cause and respiratory armitation, dustriess, and even asphymation. May also cause tightness in the ctreat. Isocyanale vigoro so myst at concernations above the augusted full. Ut are rendate four ing sensation from a subject to
	membranes in the respiratory tract (mose threat lungs); causing runny nose, sore threat coughing, chest stocomistic sortines or beath and nose, sore threat coughing, chest stocomic sortines or beath and preserving, nonspeciate threathing destructional lung van respond to concentrations below the TLV with similar symptoms as well as an astimal alliest. Exposure well above the TLV may level to bondering, bronching, providing well above the TLV may level to bondering.
SWALLOWING	are usually reversible. Chemical or hypers arrange parameter with flatified symptoms (g.g. fever, chills) has also been reported in MCES FION (s.g. fever, chills) has also being sensation hasbas, vinnifing and dainther. Can usual in irritation and possible corrosive action in the mouth, storing it and digestive fract

# ADDITIONAL EFFECTS OF OVEREXPOSURE (CHROMIC)

- -Lassitude, loss of appelite, and a tad laste may be abled at high concentrations
- —Marcotic effects have been noted. —Probonged and repealed breathing of scray mist and/or sanding dist cvet a cencif of years may cause diseases of the hings.
  - -Can cause irrelation to murbous membranes -- May cause injury to kidneys and liver
- Contact effects may occur.

   Conneal effects may occur.

   Persons with saffware-type conditions, chroner bronchilis, other chronic respiratory diseases.

   Persons with saffware consentiation should be excluded from working with isoryanates. Onco a person is diagnosed as sensitized to an isocyanate no further exposure can be permitted.

   Allergic skin or respiratory reaction may occur in some individuals. Besonatory sensitivity results is allergic demailing which may windule rash, itchnig, haves and swelling to extrain any in allose who have disabloped a skin whicher lash, itchnig, haves and swelling to extrain exposure contact with very small amounts of liquid material or even as a result of contact with very small amounts of liquid material or even as a result of contact with very small amounts of liquid material or even as a result of contact with very small amounts of liquid material or even as a result of contact with very small nervous system depression.

   High wapers any result in contrain nervous system depression.

   High wapers any essult from overland nervous system depression.

   High wapers any essult from overland nervous system depression.

—As a recult of pravious regrelled overseposures or a single large dose, certain individuels will develop issor, and the sensitization geterincial asthmal which well cause them to read to a table exposure to iscovanate at levels well heliow the TLV. These symptoms, which includes chest up hiness, whereing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours faller exposure. Similar in many and regestific asthmatic responses, there are profits after actions. Similar in many and regestific responses, there are profits after actions. This recreased hing sonsitivity can persist for weeks and in absence resist for several positivity can persist for weeks and in absence resist of several years. Chronic overaposure to isocyaniates has also been responsed in cause long damage, including decrease in lung function, which may be persistent.

WARNING\* Reports have associated repeated and profesped occapational overaxposure to solvents with permaneal train and nervous system damage, infestional misuse by deliberately concentrating and inhaling the nontents may be barmful or fatal.

WARNING! Harmth or fatal if swallowed Harraful if inhaled or absorbed brough skin. Overexposure may ususe blood disorders. Based on tests with faboratory animals, overexposure may cause reproductive disorders and brith detects.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSIPIE. Astima and any other respiratory disorders (bronchitis, emphysenta, hyperreactivity), skin atlargies, edzemā

PER CALIFORNIA S PROPOSITION 85.

This croduct contains a caernical known by the state of California to cause concer, birth defects or reproductive harm. りと見ばれば

Productingredients appear on the following cardinogenic fishings:

X I Mone of the above

PRIMARY ROUTE STOTENTRY (X) SKIN (X) BREATHING (X) SWALLOWING

IN CASE OF SAIN CONTACT:

Wash area thoroughly with soap and water. Remove soiled clothing Get medical assistance if irritation persists, Wash

AN CASE OF EYE CONTACT:

Flush with large amounts of water for at least 15 minutes occasionally litting eyelids. Get medical assistance. clothing before reuse.

IF SWALL OWED.

induce vomiting. Aspiration of material into lungs can cause GET MEDICAL ATTENTION IMMEDIATELY, DO NOT

chemical prieumonitus which may be fatal.

SPINSFALED

If you experience ditticulty in breathing, leave the area to obtain feath air. It continued difficulty is experienced. Summon in reducial assistance immediately, if breathing ceases, restore using approved CPA techniques and summon medical help immediately. Asthmatic-type symptoms in itsy develop and area? help immediately. Asthmatic-type up to several boars. Treatment is essentially symptomatio.

### SECTION VI - REACTIVITY DATA

STABILITY - Stable POLYMERIZATION - May cocur if in contact with moisture or other materials which react with isocyanalies. May occur at temperatures over 400°F (204°C).

MATERIALS TO AVOID

Excess heat and/or exidizing materiats

Avoid contact with water, alcohols, arames, strong bases, metal compounds, or surface solive ma serials

In addition. Chlorosulfonto aced

If container is exposed to high heat, it can be pressurized and possibly ruplure explosively. Isocyanates react slowly with water to form CQs gas. This gas can cause seated containers is expand and possibly rupture explosively

HAZARDOUS DECOMPOSITION

oxides of nitrogen, May decompose into furnes containing carbon monoxide, carbon dloxide, traces of HCM and HDL.

## SECTION VR - SPILL OR LEAK PROCEDURES

Absorb Inquid on inert material such as paper, vermiculite, floor absorbent, and transfer to hood. SMALL SPILL

Eliminate all ignitos sources [flares, flames including prioringhts electrical sparks] prevent spreading, pump liquid to salvage tank. Remaining tiquid may be absorbed with itself inflatent and silvavied into containers with non-speaking tools. Prevent rem-oil to servers, streams, of other bodies of water if in an off-occurs, notify the proper authorities as Persons not wearing protective equipment should be excluded from area of spitt until clean-up has been completed. Stop spitt at source, continuines of spill to LARGE SPILL

### WASTE DISPOSAL METHOD

required that a spill has occurred.

vapors to completely clear hood duct work. Dispose of contaminated absorbent, container and unused contents in accordance with local state, and lederal Allow volable postons to evaporate in hood being sure to allow sufficient time for requibitions. Do not incinerate closed containers

### SECTION WIR - PROTECTIVE EQUIPMENT

### VENTILATION/RESPIRATORY PROTECTION

manufacturer's directions for respirator use. Engineering or administrative controls should be vapors, spray mists, or sanding dusts. Wear appropriate, properly fitted respiration (MIGOSHMISH) approved; during and after application unless air monitoring demonstrates vapor, mist, and particulate levels are below applicable hours. Follow respirator. Use only with adequate sentitation. Maintain continuous flew or fresh air. Do not breathe Implemented to reduce exposure

Provide sufficient mechanical (general and/or local exhausty ventificien to maintain exposure below TEV[S].

### PERSONAL PROTECTIVE FOUIPIDENT

Do not get in eyes, on skin, or on clothing. Use solvent resistant safety eyewesr with spirish guards. Contact lenses should not be wore. Solvent impermeable gloves, ulothing, and bools are recommended to prevent skin contact in addition a respirator that is recommended or approved for use in isocyanate containing easi reaments should be used. A positive pressure air supplied respirator (TC19C NLOSH/AASHA) is recommended.

# SECTION IX — SPECIAL PRECAUTIONS AND ADDITIONAL COMMENTS

Keep closure right and upright to prevent leakage. Keep container closed when not in use. Do not store above 120°F. Do not transfer contents to bottles or other untabled containers

residues (vapor, liquid, aad/or solid). All hazard precautions given in this data sheet must be Containers of this material may be hazardous when empired because they retain product

### IMPORTANTI

precautions on the labels of all products being blanded as the combination may contain the This product may be blended with other products prior to use. Read all warrings and hazards of each component

### MIN-KARRAYEY

its war in infringement of any existing patent, and U.S. Faint arounds no responsibility or for product use, not anything contained herain, stail be construed as a recommendation for true and accusate. No warrancy or guarantee expressed or inclied is made regarding the performance of any product, since the marrier of use is beyond our control. No suggestion The information presented herein, while not quaranteed, is to the brat of our knowledge limbility for operations that do infeinge one such patents.

### FOR INDUSTRIAL USE ONLY

By professional, Trained parsonnel using proper equipment. Not intended for sale to, or use by, the general public.

11.0.T. PROPER SMIPPING HAND, FAITT B.O.T. RAKING CLAME, PRIMILALE 170110 B.O.T. CHANGE SMIPPING SMIPPING PROPER 102111 B.O.T. LARGE AB RECORDED. STANNINGER LEGGED E.H.O. UN ASSENCE ONLY ELICY E.H.O. UNAS PRESENTE F.7 E.K.O. CLASS PRESENTE F.7 E.K.O. CLASS PRESENTE F.7 R, 01-03-1986 R. 11-05-1985 07-110-1987 10-07-1985 63010 USP-1

R.01-13-1989 8.10-31-1989

02-29-1968

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FOR COATINGS, RESINS, AND RELATED MATERIALS DATE OF PHEPARATION - 10-31-1989

### SECTION

U. S. PAINT MANUFACTURER

431 S. 21st Street

St. Louis, Missouri 63103

--- 1800-424-9300 CHEMTREC (314) 621-0525 INFORMATION EMERGENCY

FOXFIRE CLEAR-COTE" ACRYLIC URETHANE TOPCOAT TRADE NAME CODE

MODIFIED ACRYLIC RESIN

PRODUCT CLASS

F3016

### SECTION IS -- HAZARDOUS INGREDIENTS

	OFF CAR SERVE	108-38-3	78-93-3	112-67-2	111-15-9	141-73-6 86	123-86.4	64742-89-9 NE	Yes
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	Br. Br.	ид	ž	** **	4.8	** **	*	**	M 30 NA 504
	KI38 -91538 -91698	35	星	F.	A A	31	ži.	5 RE	athit
[CAS #]	CENTRA CEPTANG (PPA)	\$40	Z	Handa Ah	THENSAT:	¥	#	CARBON XE	(1) Acute Oral LD50 Ratbit (2) Acute Oral LD50, Sat
[CV	STHAL ENE LEMETS OSBA OSBA STEL OFFIN (PPA)	ENZENE MO	4£ >100	ETHTLET NA	ETHYLET 3E	RANDA TE	HANDATE 200	E HYDRG	itute Ora icute Ora
ine]	USh4 SWA (2PW)	METHYL BENZENE 280 340	Z-BUTÄNÜYE 280	2-BUTBXYETHYLETHANBATE SA NA NA NA	2.ES#BXYETHYLETHANDATE 100 at ne	FTHYL CTRANDATE 400 - ME	BUFYL ETHANDATE 150 200	ALIPHASIE HYDROCARBONS 560~ NE NE	(2) 8
7		*	**	ri	2.4	<u></u>	Ŧ.	¥	
If the	KLUBI STUR DESEC- MATOR	景	ME	포	2-	*	K	*	
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[CUPAICH MANE]	ACSTH TLY/TH (PPN)	UENE 180	CASSETHYL ETHYL KETONE A 200 100	CASBUTT, SELLOSOINE ACETATE 2 NA 9A N	CANCELLOSOIVE ACETATE 25 5 RE	EIBYR AGFFATE S ADO	103841 88171 41,61318 3 150 200	<e>ce&gt;ce&gt;ce&gt;fmule una distributorits 6 100™ RE</e>	* Pelces given age in $ig/N_{\rm s}$
		<a>TOLUENE 9 10</a>	¢A>sfFT Å	CASBUL 2	ca>661 25	£ 1#47.	103841 5	48 50 F F	- :

Percent may wary due to the distillation process.

Airborne nuissance particulates tare should be taken when sanding plynesing paints. have an AEGIH 11.7 of total dust = 10 mg/H

compounds of antimony, aisebit, cadmium, lead, marcury, selenkum, or water soluble barium. ingeralisate which are based on this naterial daes not contain intentionally added

### - PHYSICAL DAIA SECYLON LIE

WOC OF MATERIAL - 543 gms./l. VOLUME PERCENT VOLAFFLE &1 WEIGHT PER GALLBA 8.77 16s. BOILING RANGE 165°F - 341°F

EVAPORATION BATE . Shower than Ether VAPOR BEAGSTF ---- Bearier Char sir

SECTION IV — FIRE AND EXPLOSION HAZARD DATA

### VAPORS MAY CAUSE FLASH FIRE DANGFRL- FLANMABLE

∯0∮ L.E.E. 21°F TCC HLASH POINT

EXTINGUISHING MEDIA — Dry Chemical or Foam

UNUSUAL FIRE AND EXPLOSION HAZARDS — Keep away from beat, sparks, build up of vapors by maintaining a continuous flow of Ingit air non-explosion-proof electrical equipment, dering use and until may spread long distances and beyond closed doors. Prevent and flame. Do not smoke. Extinguish all pitol lights and tern off aff sources of ignition, including healers, lans, and other all vapors are gone. Vapors may ignite explosively. Vapors

SPECIAL FIREFIGHTING PROCEDURES - Self contained breathing apparatus with a full facepiece operated in pressure-demand or other positive pressure mode, la case of lire, use CO<sub>2</sub>, Bry Chemical Foam, or other approved method for treating a Class 8 line Summen professional Irralighters.

### SECTION V - MEALTH HAZARD DATA

### EFFECTS OF OVEREXPOSURE (ACUTE)

Can cause severe irritation, redness, tearing,	and blaced water	Prolonged or repeated contact can cause moderate	irritation, defalling, and dermaints.	Excessive inhalation of vapors can cause nagat	and respiratory irritation, dizziness, weakness,	fatigue, nausea, headache, possible unconscious-	ness, and even asphyxiation.	INGESTION IS HARIAFUL and can cause a burning	sensation, nauses, vomiting, and diarrhes.
EYES		SKIN		BREATHING				SWALLOWING	

# ADDITIONAL EFFECTS OF OVEREXPOSURE (CHRONIC):

- -Prolonged and repeated breathing of spray mist and/or sanding dust over a period of years may cause diseases of the lungs
  - -Can causo irritation to mecous menoranes
- -Inhatatroe of concentrated vapors causes intoxical on resembing that from alcohol.
- Lassitude, loss of appearte, and a bad laste may be noted at high concentrations.

-Ingestion may cause drowsiness and in severe cases pulmonary edema

- --Hemorrhages into various vital organs have been noted -- Mild allergen.
- --- Narcotic attacts have been noted.
- -- May cause injury to kidneys and liver. -- Corneal effects may occur.
  - -- Coma may result from oyezexposure.

WARNING! Reports have associated repeated and prolonged occupailonal overexposure to solvents with permanent brain and nervous system damage, intentional misuse by deliberately concentrating and inhaling the contents may be harmful or tatal.

Based on lests with laboratory animels, overexposure may cause 16absorbed through skin, Overexposure may cause blood disorders WARNING! Harmful or fatal it swallowed. Harmful it inhated or productive disorders and birth defects.

# PRIMARY ROUTE STOKENTRY TYSKIN (X) BREATHING (X) SWALLOWING

Wash area thoroughly with soap and IN CASE OF SKIN CONTACT:

water Remove soiled chothing. Get credical assistance if irritation pro-

sists. Wash clothing before reuse

Flush with large amounts of water IN CASE OF EYE CONTACT:

for at teast 15 minutes. Get medical 839 ts tance,

IF SWALLOWED:

GET MEDICAL ATTENTION IMMEDIATELY. can cause chemical pneumonitis which Aspeation of material into lungs DO NOT induce vomiting. may be fatal.

sectioiques and summon medical help ceases, restore using approved CPR is expecienced, summon medical asbreathing, leave the area to obtain sistance intractately. If breathing fresh air. Is continued difficulty If you experience difficulty ia es mediately. IF INHALED:

### SECTION W -- REACTIVITY DATA

HAZARDOUS POLYMERIZATION - Can not octur.

STABILITY - Stable.

MATERIALS TO AVOID

Excess heat and/or oxidizing materials.

Chloroform In addition

Forassium-tert-bufoxide Chloresulfonic acid

Hydrogen peroxide Nitric acid

HAZARDOUS DECOMPOSITION

May decompose usto furres containing carbon inconcide and carbon digaide

When heated to decomposition enrits toxic furnes.

## SECTION VII - SPAL OR LEAK PROCEDURES

Absorb isquid as most material such as paper, vermiculite, floor absorbertf, and transfer to hood, SWALL SPILL

protective equipment should be excluded from area of spill Prevent run-off to sewers, streams, or other bodies of water ent, and shoveled into containers with non-sparking tools. until clean-up has been completed. Stop spill at suarce, contain area of spill to provent spreading, pump liquid to salvage tank. Remaining inquid may be absorbed with inert material such as sand, clay, earth, or floor absorb-Fluxinate all ignifion sources (flares, flames including pilot rights electrical aparks). Persons not wearing If run-off occurs, notify the proper authorities as required that a spill has occurred. LARGE SPILE

### WASTE DISPOSAL METHOD

hood duct work. Dispose of contaminated absorbent, con state, and federal regulations. Do not incinerate closed Alfow volatile portion to evaporate in hood being sure to allow sufficient time for vapors to completely clear leiner and unused contents in accordance with Local Containers.

### SECTION VIII PROTECTIVE EGUIFMENT

### VENTILATION/RESPIRATORY PROTECTION

West appropriate, property fitted respirator (NIOSH/NSHA approved) Engineering or administrative controls should be impremented to during and alter application unless air munitoring demonstrates Use only with adequate sentilation, Maintam continuous flow of fresh air. Do not breathe vapors, spray mists, or sanding dusts. vapor, mist, and particulate levels are below applicable limits Follow respirator manufacturer's directions for respirator usa, reduce exposure.

Provide sufficient mechanical (general and/or local exhaust) ventilatron to maintain exposure below TLV(s)

### PERSONAL PROTECTIVE EQUIPMENT

Do and get in eyes, on skin, or on crothing. Use solvent regularly safety eyewear with spilash guards. Solvent imperareable glones, clothing, and boots are recommended to provent skin contact

# SECTION IX — SPECIAL PRECAUTIONS AND ADDITIONAL COMMENTS

Keep closure tight and woright to prevent leakage. Keep container closed when not in use. Do not store above 120° F. Do not iranster confents to bottles or other unfatigized containers. Containers of this material may be hazardnos when emptied because hazard precautions given in this data sheet must be observed they retain product residues (vapor, liquid, andvor salid). A'l

### IMPORTANTE

this product may be blended with other products prior to use. Read blended as the combination may contain the hazards of each com all warmings and precautions on the labels of all products bang

### WIN MARSHUTT

construst as recommendation for its use in infrugatent of any exist ing petent, and U.S. Paint essures no responsibility or libbility best of cur knowledge true and accurate. No warranty or gunnated The infarmation presented hatein, while mot quasacteed, is to the gestion for perduct use, nor emphasing contained facein, shalt be product, since the manner of use is heycond our control. My sug expressed at implied is aske regarding the performance of any for exerting that do winings any such patents.

### FOR INDUSTRIAL USE ONLY

By professional, trained personnel using proper equipment. Not mtended for sale to, or use by, the general public.

F 3016

USP-1

10-17-1985

R. 06-05-1986

# FOR COATINGS, RESINS, AND RELATED MATERIALS

CATE OF PREPARATION -- 10-31-1989

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MANUFACTURER U.S PAINT

331 S 21st Sheet St. Louis, Missouri 63163

INFORMATION (314) 621 0525

ENERGENCY CHEMTREC -- 1-800-424-9300

PRODUCT CLASS NOOIFIED POLYAMIDE RESIM

TRADE NAME Converter For 30-Y-94" (S900f) Mnn-Sanding Mil-Spec Anti Corrosive Epoxy Pitmer For Fast Recoat

CODE S3001

### SECTION II — HAZARDOUS INGREDIENTS

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	TAPOR PAZ SSUR (see Sylder)	87-63-9	33	39-93-3	3.0	123-86-4	<b>E</b>	31-36-3	40	108-64-3	53	680BZ-19-1	pr.
	ISHALITION I.Es. (PPR/Ar)		48.5		<b>水</b> 湖		N.A.		NA		N.A.		N.A.
	19. P.		W.A.		2		¥.		Z		MA		<b>1</b>
	SCH RESIGNATION		38		Ή		Ή		3		H		JH.
[CAS #]	CERTS SERVING CERTIFIES		ME		AE		PR.E		50		M		RE
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[CHICHTORL NAME]				•	脈	***	34.	•	ИE	***	3/2		ME
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[COUNOR NAME]	4644) (PM)	I SOPREPYL ALCOHOL	29 460 506	HE STH	602	NORMAL BUTSE ACFTATE	158	Table But	\$ B	CA > FOR MENE	3 100	FOLYHERIC ASSIDIO AHINE	뀰
	£1541	150716	53	CANE 1	1.1	NO SERVE	#	< 4 > NOS	7.7	C#> FOR	_	FOR YHE	18

at N No Y Year	MA Not Available	NAP - Not Applicable	NE Not Established
(1) Acute Orel LOSO Mabhit	(2) Acuta Sral 105D, Nat	(3) Dermal LD50 Rabbit	(4) Darmal LDSG Rat
	** Yelves given are in ook	As recomended by warnfacturer	AND I SPRA MY SEPORTABLE

 <sup>(</sup>B) - Contains a SABA 311 reportably makerial which may include xylene, toluses, and ethylbenzare.
Percent not vary due to the distillation process.

Care should be taken when sanding pigmented paints. Aithorne malsance particulates have an ACGIM TLV of lotal dust = 10 mg/M?.

This material does and contain Intentionally added ingredients which are based on compounds of antimony, arseate, cadmium, fead, mercury, setentum, or water sofuble bartisms.

### SECTION III - PHYSICAL DATA

WEIGHT PER GALLON 8.96 lbs.

VOLUME PERCENT VOLATHE 84

BORING BANGE 172°F - 262°F

VOC OF MATERIAL 679 gms.A.

EVAPORATION BATE — Slower than Elher VAPOR DENSITY —— Heavier than Air

# SECTION IV - FIRE AND EXPLOSION HAZARD DAYA

### DANGERI – FLAMMABLE VAPORS MAY CAUSE FLASH FIRE

FLASH POINT 21"F FCC

LEL 1.27

## EXTINGUISHING MEDIA - Dry Chemical & Foam

UNUSUAL FIRE AND EXPLOSION HAZANDS — Keep away from heat, sperks, and hame be not smoke. Extinguish all pilot lights and turn off all sources of igalion, inclinding harters, fans, and other non-explosion-proof electrical equipment, during use and until all vapous are gone. Vapors may ignite explosively. Vapors may spread tong distances and teryand closed dones. Prevent build up of vapors by distributing a continuous flow of fresh ar

SPECIAL, FIREFIGHTING PROCEEURES Self contribued breathing apparatus with a full facepiece operated in pressure-demand or other positive pressure indicated in pressure forms of other positive pressure and in the use CO<sub>2</sub>, Dry Chemidial, Foam, or other approved method for freating a Class B fire sommon professional firefighters. Outling a fire, toxic gases and smoke are initials present from decomposition/combusions, Closed container may explode when exposed to extreme frest

### SECTION V - HEALTH HAZARD DATA

### EFFECTS OF OVEREXPOSURE (ACUTE)

EYES Can cause severe inflation, redness, tearing, and blurred visida	Causes eye burns SXIN Projetaged or repealed contact can cause acoderate tiritation,	defaiting, and demainis Causes skip burns Solvents can peterals	the shin causing effects similar to those identified under acute	breathing symptoms. Sensitizer - may cause affergic skin reaction	wasch can be severe in certain melividuals.	4G Excessive tabalished of vapors can cause nasal and respiratory	irriblion, dizaness, weakness, fallgue, nausea, headache, possible	unconsciousness, and even asphyxiation. May also cause highlines in	the chast. Sassifter - may cause affergic respiratory reaction. Effects	may be permanent.	4G INGESTION IS MARREUL and can cause a burning sensation, sore
ΕY	Š					BREATHING					SWALL OWING

# ADDITIONAL EFFECTS OF OVEREXPOSURE (CHRONIC):

ibrasil, abdomeal pain, wauses, vooviing, and diarrhea.

- Profonged and repeated breathing of spray mist and for sanding dust over a period of years may
  cause diseases of the fungs.
  - -- Lassitude, loss of appetive, and a bad laste may be noted at high concentrations
    - -Affects cantral nervous system.
- Narcotic effects have been noted
   Cornest effects may occur.
- -High vapors may result in central nervous system depression
  - -- May cause injury to Aidneys, liver, and lungs.
    - -Coma may result from overexposure.

solvents with second and being and servous system damage intentional misuse by deliberately WARNING! Reports have associated repeated and protonged occupational overexposure to concentrating and whaling the contents may be harmful or fatal

PER CALIFORNIA'S PROPOSITION 65

WARING This product contains a chemical known by the state of California to cause cancer buth defects or reproductive harm.

Product ingredients appear on the following carcinogenic listings 1 JOSHA

(X) None of the above.

PRIMARY ROUTE IST OF ENTRY (X) SKIN (X) BREATHING (X) SWALLOWING

FIRST AID

Remove soiled Wash area thoroughly with soap and water IN CASE OF SKIN CONTACT

cfothing. Get medical assistance if initalion persists. Wash clothing before reuse.

Flush with large amounts of water for at least 15 minutes. IN CASE OF EVE CONTACT.

Get medical assistance,

induce vocating. Aspiration of material into longs can cause GET MEDICAL ATTENTION IMMEDIATELY, DO NOT SYME! OWED:

chemical preumonitus which may be fatal.

F WHALED:

If you experience difficulty in breathing, leave the ares to summon medical assistance Immediately. Il breathing obtain tresh air. If continued difficulty is experienced, ceases, restors using approved CPR techniques and summon medical help immodiately.

### SECTION VI — REACTIVITY DATA

STABILITY -- Stable, HAZARDOUS POLYMERIZATION -- Can not occur,

MAFERIALS TO AVOID

Excess heat and/or oxidizing materials.

Chromism Isloade in actelliton

Potassuum-lest-butoxide Chloroform

Chlarosulfonic acid Hydrogen peroxide

Strong acids Minne acid

HAZARDOUS DECOMPOSITION

May decompose into fumes containing carbon monoxide, carbon dioxide, and oxides of

When heated to decomposition emits toxic fumes

## SECTION VII — SPILL OR LEAK PROCEDURES

SMALL SPILL. Absorb liquid on inest material such as paper, vermiculite, lloor absorbeat, and fransier to hood. Etiminate at ignition sources (flares, flames laciteding pilot lights, efectrical sparks) prevent spreading, pump liquid to salvage tank. Remaining liquid may be absorbed with med material such as sand, clay, earth, or floor absorbent, and shoveled into Persons not wearing protective aquipment should be excluded from area of spill containers with non-sperking toots. Prevent run-oil to sewers, siteams, or other until clean-up has been completed. Stop spif at source, costain area of spift to LARGE SPAL

bodigs of water. If wan as occurs, addity the proper audionities as required that a spiff has occurred

### WASTE DISPOSAL METHOD

٠,

vapors to completely clear hood duct work. Dispose of contaminated absorbent, Allow votatile pornon to evaporate in hood heing sure to allow sufficient time for container and unused contents in eccordance with focul, state, and federal regulations. Do not incinerate chased containers.

### SECTION VIII - PROTECTIVE EQUIPMENT

## MENTALATION/RESPIRATIONY PROTECTION

manulaciluter's directions for respiratar use. Engineering or administrative controts should be (NROSH/NSNA approved) during and after application unless air monitoring demonstrations Use only with adequate rentriation. Maintain continuous flow of fresh air. Do not breathe vapors, spray oasts, or sanderg dusts. Wear appropriate, properly litted respirator vapor, mist, and particulate levels are before applicable imus. Follow respirator implemented to reduce exposure.

Provide sufficient insohanscal (general and/or focal exhaust) venhation le maintain axposure below ILV(s).

### PERSONAL PROTECTIVE EQUIPMENT

Do not get in eyes, on skin, or on clothing. Use solvent resistant salety eyewear with spiash guards. Solvent impermeable gloves, clothing, and hoots are recommended to prevent skin

# SECTION IX - SPECIAL PRECAUTIONS AND ADDITIONAL COMMENTS

ដ Keep closure tight and upright to provent leakage. Keep container closed when not in use and store above 120°F. Do not transfer contents to bottles or other unlabeled containers

residades (vapor, fiquid, and/or solid). All hazasú precavitons given in Ihis data sheet must be Containers of this material may be hazardous when emptied because they retain product

### MPORTANTE

This product may be bleaded with other products prior to use. Read all warnings and precautions on the tabets of all products being blended as the combination may contain the hazards of each component

### HENNERAWIT

for product use, not unpthing contained becain, shall be construed as a recommendation for its use in infringement of any existing patent, and U.S. Paint assumes no responsibility or true and accurate. No wateranty or quarantem expressed or implied is made requesifing the performence of any product, since the asrner of use is bayand our control. No suggestion The information presented herein, while not guscentred, is to the bust of our knowledge Hability for operations that do infringe any such patents.

### FOR INDUSTRIAL USE ONLY

By professional, trained personnel issing proper equipment that latended for side to, or use by, the general public.

USP-2

\$3001

10-04-1985

R, \$2-19-1985

R 62-19 1987 R . 07-09-1989

# FOR COATINGS, RESINS, AND RELATED MATERIALS

DATE OF PREPARATION - 03-16-1990

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CTIO
C)

\$ \$ \$
TRACE NAME 50-Y 94" Non-Sanding Air-Spec Anti-Corosive Epoxy Primer for Each December Methods State States Methods States

### SECTION II -- HAZARDOUS INGREDIENTS

\$3001

CODE

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	(1) Acorta Ores 1050 labolt	(2) Aruka Oras 1050, Bat	(3) Serves LD50 Subbit	(4) Gerseal (D50 Sat	sterlas which may include applace.
•	* Yedinds given sea for my Dig	th Kalues given sea in my'M'	for a recommended by mensifectures	<. A) - SAGK 313 REPORTABLE	<8> - Contains # 5486, 313 reportable material which may include anies and attributement.

Percent may very due to the distillation process. Mppce - Militon particles per rubic fosts.

Care should be taken when sanding argmented paints. Airborne missance particulates have sp. ACGH; TLV of total dust > 10 mg/M².

This material does not contain intentionally added rigredients which are based on compounds of antimony, arsenic, eadmum, lead, mercury, selentism, or water soluble banum.

### SECTION IN -- PHYSICAL DATA

WEIGHT PER GALLON 11:36 lbs	VOLUME PERCENT VOLATREST
BOILING RANGE 172° F 262° F	VOC OF MATERIAL 481 gms /
EVAPORATION RATE - Stower than Ether VAPOR DENSITY Heavier than Air	- Stower than Ethac Hearner than Air
SECTION IV - FIRE AND EXPLOSION HAZARD DATA	PLOSION HAZARD DATA
DANGESI FLANMABLE VAPORS MAY CAUSE FLASHFIRE	AMMABLE SE FLASHFIRE

## EXTINGUISHING AREDIA — Dry Chemical or Foam

1 20

FLASH POINT 21°F ICC

UNUSSUAL FIRE AND EXPLOSION HAZABOS — Keep away som heat sparks and liame Do not smoke. Extraguest all pilot lights and form off all sources of ignition, including heaters, fans, and other non-explosion-proof dectrical squipment, during use and orbit all vapors are goine. Vapors may ignise explosively, Vapors niay spread larg distances and beyond closed doors. Prevent build up of vapors by manhalining a continuous flow of lash air.

SPECIAL FIBEFIGHTING PROCEDURES — Self contained breathing apparatus with a full sacepiece operated in pressure-demand or other positive pressure mode in case of line, use CO<sub>2</sub>. Only Chemical, Foarn, or other approved method for treating a Class B fire Swimmon professional fineligities. During a fire, Joxic gases and smoke are initiatis present from decariposation/combination. Classes, containers may explose when exposed to extreme heat

### SECTION V - HEALTH HAZARD DATA

### EFFECTS OF OVEREXPOSURE (ACUTE)

Cars cause severe irritation, redness, rearing, and blured vision Cootains materials that may cause severe eye injury - damage reversible	Protonged or repeated contact can eause moderates rentation detailing, and dermatius. May be a weak sensitizer. Can cause allergac skin reaction in certain individuals. Solvents can per ettate the skin causing effects similar to those identified under acute breathing.	symptions.  Excessive inhaltation of vapors can cause has and respiratory irritation, drainess, weakness, fatigue, nausea, headsohe, gossible unaconsciousabless, and even asphyxation. Alay also cause iightness in	the chest INGESTION IS HARMFUL and can cause a burning sensation, sore throat, abdominat pain, nauses, vonsing, and diarrhes
EYES	SKIN	BREATHING	SWALLOWING

# ADDITIONAL EFFECTS OF OVEREXPOSURE [CHRONIC)

- --Long ferm, unprotected exposere to dost levels in excess of the PEL may cause lung disease (silicosis). Follow the Safe Handling Practices shows on the tabe!
  --Protonged and repeated breathing of spray mist and/or sanding dost over a penod of years may
- ceuse diseases of the fungs.

  --Lassitude, loss of appetile, and a bad taste may be noted at high concentrations.
  - -- High vapors may result in central nervous system depression.
  - -- High vapors may fessen in cen-
- -- Marcotic effects have been noted.
- -May cause injury to kidneys and liver.
- -May cause hang lajury.
- Chromate salts are recognized carrinogens of the tungs, nessi cavity, and paramatal sinus, also exparimental carcinogens of the stomach and larynx.
  - -Coma may result from overexposure

Prologged overtaposure by inhalation may cause delayed lung injury/disease (silicosts). On the besis of intitial experimental teste in animals and limited spicenjodical studies in Susan populations, the international Agency for Reseasch on Cancer (fARC) has concluded that there is labelted stydency for five some carcinogenicity of crystaline salids to thusna. INRC has contrinogenicity of crystaline salids to the carcinogenicity of crystaline salids to the carcinogenicity of crystaline salids.

solvanis with permanant brain and nervous system damage. Intentional misuse by deliberately WARNING! Reports have associated repeated and prolonged accupational overexposure to concentrating and inhaling the contents may be harmful or latel.

Medical conditions which may be aggrevated; PRG-Existing Upper Resphatory and Lung DISEASE SUCH AS, BUT NOT LIMITED TO BRONCHITIS, EMPHYSEMA AND ASTHUM.

PER CALIFORNIA'S PROPOSITION BE

WARNING: This product contains a chamical knows by the siste of California to cause cander,

hrith defects or reproductive harm. Product ingredients appear on tite following carclangenic listlings:

(x) OSHA (x) IARC (x) NFP ( ) None of this above. PRIMARY ROUTE(S) OF ENTRY (X) SKIN (X) BREATHING (X) SWALLOWING

FIRST AID.

Wash area thoroughly with soap and water. Remove solled ciothing. Get medical assistance if irritation persists. Wash IN CASE OF SKIN CONTACT:

ciashing before reuse

Flush with large amounts of water for at least 15 minutes. IN CASE OF EYE CONTACT:

Get medical assistance.

GET MEDICAL ATTENTION IMMEDIATELY, DO NOT induce vomiting. Aspiration of material into lungs can cause chemical preumonilus which may be latak # SWALLOWED:

If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, susmon medical assistance immediately, if breathing ceases, restore using approved CPR techniques and summon medical help immediately.

IF INHALED:

SECTION VI - REACTIVITY DATA

STABILITY - Stable,

HAZARDOUS POLYMERIZATION -- Cas not occur.

Contemination with strong acids, bases, amines, or mercaptens can cause polymenization. Store in stainless steet or atuminum containers. MATERIALS TO AVOID Excess heat ang/or exidizing merecials.

Chloroform in addition

Fotassium-tert-butoxide Calorosullanic acid

Нуфедев раголіда Milric acid

HAZARDOUS DECOMPOSITION

May decompose into temes containing carbon monoxide and carbon dovide.

When heated to decomposition emits toxic lumes.

SECTION VIII— SPILL OR LEAK PROCEDUMES

Aboot liquid on thert material such as paper, vernicelite, floor absorbant, and SMALL SPILL

Elminate all ignition sources (lister, ilemes including pilet lights, electical sparks). Persons not wearing protective equipment should be excluded from area of spile until clean-up has been completed. Stop spill at seurce, contein area of spile to prevent spresking, pump liquid to salvage tank. Remaining liquid may be absorbed LAHGE SPILL

with inest material such as saild, clay, earth, or item absorbast, and shoveled into bodies of water. If run-off occurs, spirity the proper authorities as required that a containers with non-sparking tools. Prevent run-oil to severs, streams, or other spill has occurred.

### WASTE DISPOSAL METHOD

vapors to completely clear hand duct work. Dagose of contaminated absorbant, Altow votatile portion to evaporate in bood being sure to allow sufficient fime for container and usused contents in accordance with local, state, and federal regulations, Do not incingrate closed containers.

### SECTION VIII - PROTECTIVE EQUIPMENT

### VENTILATION/RESPIRATORY PROTECTION

manulacturer's directions for respirator use. Enginaering or administrative conisols should be [NIOSH/MSHA approved] during and after application unlass air monitoring demonstrates Use only with adequate rentifiation. Maintein continuous flow of fresh eir. Do not breathe yapors, sprey mists, or sanding dusss. Wear appropriate, properly titled respirator vapor, mist, and particulate levets are below applicable limis. Follow respirator implamented to reduce exposure.

Provide sufficient mechanical (general and/or local exhaust) ventitation to maintain exposure below FLV(s)

### PERSONAL PROTECTIVE EQUIPMENT

Do not get in eyes, on skin, or on clothing. Use solvent resistant salety eyewear with spitash geards. Solvent impermeable groves, crothing, and boots are recommended to prevent skin

# SECTION IX - SPECIAL PRECAUTIONS AND ADDITIONAL COMMENTS

kesp closure light and upright to prevent leakage. Keep container closed when not in use. Bo not store shove 120° F. Bo not kansfer contents to trottles or other unlabeled containers.

product residue (vapor, itquid, and/or solid). All hazard precautions given in this data Containers of this material may be hazardous when empited because they retain speet must be observed.

### MPORTANT

This product may be blended with other products prior to use. Read all warnings and precautions on the labels of all products being blended as the combination may contain the hazards of each component.

### MCN-WARRAGET

for pruduck use, not anything contained herein, shall be construct as a recommendation for like use in infilingment of any selekting patent, and U.S. Paint assumes no responsibility or performance of any product, since the server of use is bayond our control. As suggestion The information presented herein, while not quarentend, is to the best of our knowledge true and attucture. He sertanty or quarantes expressed or Japited is made regarding the limpility for operations that do infringe any such patents.

FOR INDUSTRIAL USE ONLY

By professional, trained personnel usleg proper equipment. Not intended for sale to, or use by, the general public. D.G.T. PROPER SEIPEIMG TANK. PARITED D.G.T. HANGEL T.LOUTD D.G.T. HANGEL T.LOUTD D.G.T. WARE CLASS. TO THE SEIL OF D. D.G.T. LANGELS SEIL DESTRUCTION TRANSFELL ELQUID I.A.G. DE MENDER. D.S.T. D. CLASS WINESEN. 3.3. T.L. C.G.S. WINESEN. 3.3. T.L. C.G.S. WINESEN. 3.3. T.L. C.G.S. WINESEN. 3.3. T.L. C.G.S. WINESEN. 3.3. 8.01-03-1989 R. 12-12-1965 R. 02-25-1987 R. 63-08-1958 10-14-1985 59001 255

8.10-31-1989

FOR COATINGS, RESINS, AND RELATED MATERIALS

10-31-89 DATE OF PREPARATION -

SÉCTION !

U S PAINT MANUFACTURER

Stipuls, Missouri 63103 P.11 S. 21st Street

(314) 521 0525 INFORMATION CHENTREC --- 1-860-424-9360 **EMERGENCY** 

SOLVENT BLEND PRODUCT CLASS STANDARD REDUCER FOR EPOXY PRIMERS THADE NAME

CODE

1000

### SECTION II - HAZARDOUS INGREDIENTS

	MPAR PRESHRE (na ROERCE)
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CAS # 107-98-2 (2) 7000/4	CAS # 78-93-3 (2) 2000/2	cAS # 71-36-3 (2) 8520/6	CAS # 123-86-4 (2) 2000/4	EAS N 100-EB-3	7 Tes reitable ppikostie steblished
CAS # 107-5 5,40(2) 7000/4	CAS # 78-97	CAS # 71-36 2.50(2) 8520/6	CAS # 123-4 13.10(2) 2000/4	5 09(2) 4000/4	H Mo T Tes HH Mot Avsitable HMP Mot Applicable MC Mot Cakablished
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PROPAN NA	ž	20	ATE MA	HYL BENZEME HRE LSG SHIT HA	(1) Acute Graf 1950 Rabble (2) Acute Orel 1090, Ral (3) Depost 1050 Rubble (4) Depost 1050 Ru
PER NEGUXY 2 PROP IOS 150 MA	HEANENE 200 300	LUFAMOL. NA MA 50	OFFL ETHANDATE ISO 200 NA	BENZE ESO	- Acute Acute Depuis
THER I METHOSY 2 PROPANOL ION ISO MA	2-MITANENE 200 3	I BUYANDE NA	BULYL ETHANOATE 150 200 M	III THING BENZEME	* Yajura given are la mg/N, ** Yajura given are la mg/N, ** Yajura given are lo ug/N, ** Yajura given are la ug/N, ** Yajura given a
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HONIDAK, EUTYL NA MA	(1) [1) [1] [1] [1] [1] [1] [1] [1] [1] [1] [1]	ikit. Isto	ARE USO	We MAN	Eth myth In wyth d by marker RTABLE
LYCHL I	THYL CREM. B	. # CH	2009	20	given act garen act eccemende 31) MPO
PROPELEM CINCUL MONINGENT ETHER I MIL	눞	A) N-DITIYE, ALCORRE, 18 50 NA	DERMI RUTYL ACFTARE	70LM 45.	* Yedura given see in seph)  ** Yedura garen oro in uguh  pr Aa recommended by minufacturee  (A) - Suka 31) Alfontani
1808°1	\$ E	\$ C	ORIMI Er.	€ हैं	

Percent say wary due to the distillation process,

Care should be taken when sending pigmented petats. Airborne einsance perifoxiets have an ACGIst TLV of

lotal dust = 10 mg/M\*

which are based on compounds of antimony, prsents, cudantum, lead, mercury, selonium, or water soluble baraim. This material does not conjain fatentionally added ingredients

### SECTION III -- PHYSICAL DATA

LOM ? 13 ths.	122"F - 262"F
WEIGHT PER GALLION 2 13 Dis.	BOILING BANGE

VOC OF MATERIAL 854 gms AL

VOLUME PERCENT VOLATRE 150

EVAPORATION RATE — Slower than Ether VAPOR DENSITY ——— Reavier than Air

## SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

DANGERI — PLAMMABLE. VAPORS MAY CAUSE FLASH FIRE.

LEL 1.27 FLASH POINT 21"F TCC EXTINGUISHING MEDIA — Cry Chamical or form

Unisual fire and explosion hazards — Kood Bury from hool spriks non-explosion-proof elecinical equipment, during use and uniff all vegets are gone. Vapors anay ignite explosively. Vapors may spread long distances and beyond closed dexis. Prevent build up of vapors by mainteining a continuous flow of fresh aft. and liame. Do not awake, Exitogués all pilot lights and furn off all sources of igaillea, including halters, lane, and other

SPECMI, FIREFIGHTING PROCEDURES — Self contained breathing apparepositive pressure mode, in case of line, use CO<sub>2</sub>, Dry Chamice? tes with a full tecepiece operated in pressure-demand or other Foam, or other approved method for treating a Class Billie. Symmon professional lifelighters.

### SECTION V - HEALTH HAZARD DATA

### EFFECTS OF OVEREXPOSURE (ACUTE)

Can cause severe inflation, redness, tearing, and bitared bilared	Prolonged or repends contact can cause moderate impaison, defating, and dermatifis,	Excessive Inhelation of vapors can dause name!	and respiratory initation, dixulosis, weathers. Initale, madese, hendache, possible unconscious-	ness, and even esphyxiation. PNGESTION IS HARMFUL, and can cause a buming sensation, neuses, vontiling, and claribas.
EYES	SKIN	BAEATHING		SWALLOWING

# ADDITIONAL EFFECTS OF OVEREXPOSIBLE (CHRONIC):

- --Protonged and repealed breathing of spray rulet anglor asoding dust over a period of years may cause diseases of the lungs.
- -Lassilude, loss of appelies, and a bad leste may be noted at high concentrations,

-Rasal sad respiratory lititant.

-- Nascotte eitherts have been noted

--Corneal effects may occur.

- -- Mild shergen,
- WARNING! Reports have essociated repeated and protosignd occupational overexposure to solvents with permanent brain and nervous system dranage. Intentional misuse by delibersialy concentrating and inhaling the contents may be harmful or falst,

Primary Rosse(s) of Entry (s) skin (x) treathing (s) swaltowing

FIRSTARD

Wash area thoroughly with soop and water, Hemove solled shelling. Get medical assistance if irritation per-IN CASE OF SKIN CONTACT.

usts, Wash clothing belone reuse.

295[4]415CB

for at heast 15 minudes, Get medical Flush with large emounts of motor IN CASE OF EYP CONTACT:

GET MEDICAL ATTENTION MANIEDIATELY. DO NOT Induce verniking. IS SWALLOWED:

cso cause chemical programmatik which Aspiration of material into lungs may be tatal

F WHALED.

fachingsos and summon medical halp is experienced, summon medical nacoases, reatore using approved CPR breshing, leave the sees to obtain fresh sir. If continued difficulty sistance immediately. If breathing If you experience difficulty in mmerketely.

SECTION WI - REACTIVITY DATA

HAZARDOUS POLYMERIZATION — Can not occur

STABILLTY - Stable.

MATERIALS TO AVOID

Excess heat and/or oxidizing materials.

Chromium trioxide Chlorotoms Alumisum In addition

Poressium-lest-butoxide Chlordaultonic acid

Hydrogen peroxide Patric sold

HAZARDOUS DECOMPOSITION

May decompase into tures containing esrban menoalds and carbon dioxids

When healed to decomposition emits toxic fumbs

### SECTION VII - SPILL OR LEAK PROCEDURES

Absorb liquid on mert material such as paper, vermiculite. SMALL SPILL

floor absorbers, and transfer to hood.

Present run-off to sawers, afreens, or other bodies of wallst. protective equipment should be excluded from area of split inert material such as sand, clay, as thy, or floor affector-ers, and showeled into containers with non-sparking tools. to salvage tank. Remaining liquid may be absorbed with until cream-up has been completed. Stop savit at source, contain area of spill to prevent apreading, peen liquid Efformate attignifica agusces (flares, fleroes facileding pitet lights, etectrical sparks). Persons not wearing If run of occurs, notify the proper authorities as required that a spill has occurred. LAPIGE SPILL

### WASTE DISPOSAL METHOD

to allow suitilizing time for vapors to completely char-hood duct work. Dispess of contaminated absorbert, consiste, and federal regulations. Do not incinerate closed Altow volatile portlom to eveponete in hood being sure tainer and unused contents in accordance with local, confiners.

### SECTION VIII - PROTECTIVE EQUIPMENT

### WENTILATION/RESPIRATORY PROTECTION

heah eir. Do not araalbe vepors, spray miste, or sending dusts Wear appropriate, property litted respirater (NIOSH/MSHA approved) Enginessing or administrative centrols should be implemented to during and after application unioss air mentoring demonstrates Jse only with adequate ventilation. Meintate continuous Now of vapor, mist, and particulate tevels are below applicable limits Follow respirator manufaciturer's directions for respirator use. reduce exposure.

Provide sufficient mechanical (general and/or local extraust) ventilation to maintain exposure below TLV(s).

### PERSONAL PROTECTIVE EQUIPMENT

De not gel in eyes, on skin, as on cletifing. Use selvent resistent safety øyewear wilh spiesh guarde. Solvent impermeable gfores, clothing, and books are recommended to preyent skin contact

# SECTION IX — SPECIAL PRECAUTIONS AND ADDITIONAL COMMENTS

Keep closure light and upright to prevent keakage. Keep contether closed when not in use. Do not transfer contents to boilles or other untabeled containers. Containents of title material may be hazardinas when empiled because they retain product restdue (vapor, fiquita, end/or solid), All hazard precautions given in this date sheet must be observed

### IMPORTANETI

This product may be alsonded with other products prior to use. Foad all warelings and precautions on the labets of all products being blanded as the combinetion may contain the hazards of each com-

### PACINI-MARRIANCE Y

construed as racommendation for its use in infringement of Any extatbest of our traminings have and accurate. No mansanty or quantates ing patent, and U.S. Paint assumes no responsibility of Hability The information presented hareln, while not quarenteed, is in the product, since the meanure of use is beyond dur control. We suggestion for product use, nor snything contained batein, whell be expressed or implied to each regarding the parformance of may for operations that do locinfrage say teach patents.

### FOR INDUSTRIAL USE ONLY

By prelessional, trained parsonnel using proper equipment Not Intended for sale to, or use by, the general public

R. 12-12-1965 10-14-1985

R.05-18-1987

### MATERIAL SAFETY DATA SHEET / FICHE SIGNALÉTIQUE

SECTION I - MATERIAL IDENTIFICATION AND USE / IDENTIFICATION DE LA MATIÈRE ET USAGE

MATERIAL NAME / IDENTIFIER - NOM / IDENTIFICATION DE LA MATIÈRE

URETHANE BASE - GLOSS YELLOW DURATHANE 4600-Y-9 7600-Y-31 (4600)

FLAT YELLOW DURATHANE 4700-Y-9

BRISTOL AEROSPACE
LIMITED
OCT 201989
PERSONNEL

	₹\00-X-A			
TEMPO PAINT (DIV. OF TOWER C	HEMICALS)	TEMPO PA	** * * * * * * * * * * * * * * * * * * *	WER CHEMICALS
205 FERMAR DRIVE		SIPEEI ADDRESS/AD		
WESTON, ONTARIO		WESTON	ONTAR	
M9L 2X4 CANUTEC 1-613-996-	5666	M9L 2X4	CANUTEC 1-613	-996-6666
POLYESTER COATING	MIXTURE		N/AP	
4600 DURATHANE, Yellow	N/AP	POIDS NOT SOLANIE	COATING	
SECTION II — HAZARDOUS INGREDIEN	TS OF MATER	NAL / INGRÉD	HENTS DANGEREUX DE	E LA MATIÈRE
MAZAPDOLIS PIGREDIENTS/INDRÉDIENTS DANGEREUX	APPROVIMATE CONCENTRATION APPROXIMATIVE (%)	CAS. HA OR VAL NUMBERS NUMBERS CAS. NA QUI ONV	CO., (SPECIFY SPECIES & ROUTE) TO., PRECISEN LESPECE ET LA VOIE D'ADMINISTRATION	UC., ISPECIAY SPECIES AND ROUTE; CL., PRECISEN LESPEGE ET LA YOR CHASISHES INATION
Lead Chromate	30~60	7758-97-6		N/AV
Polyester Polyols	30-60	N/AV	> 2000 Mg/Kg N/AV	N/AV

	APPROXIMATIVE (%)	HY OU OHU	ET LA VOIE D'ADAMESTRATION	ET LA VOIL D'AZAMHESTRATION
Lead Chromate	30~60	7758-97-6		N/AV
Polyester Polyols	30-60	N/AV	> 2000 Mg/Kg N/AV	N/AV
Propylene Glycol Mono Methyl Ether Acetate	10-30	107-98-2	Oral Rat 5710 Mg/Kg	Inhalation Rat 5344 ppm 4 Hrs
2,4 Pentanedione	1-5	123-54-6	Oral Rat 1000 Mg/Kg	n/av
2-Ethoxy Ethyl Acetate	1-5	111-15-9	Oral Rat 2900 Mg/Kg Dermal Rabbit 10500 Mg/Kg	N/AV
Lead Sulfate	1-5	7446-14-2	Oral Rat 2000 Mg/Kg	n/av

	L DATA FOR MATERIAL / CAI	RACTÉRISTIQUES PHYSIQUES	DE LA MATIÈRE
PHYSICAL BIATE/ETAT PHYSICUE		COCUSI AND APPEARANCE/QUEUR ET APPARENCE	
GAS-GAZ KI UKUNDAKKUNDE [	] soilvaces	YELLOW VISCOUS LIQU	ID, PUNGENT ODOUR
0.14-0.25	SPECIFIC GRANTY! ODNISTE RELATIVE 1.52	TENSION OF AMERICA DAMA	VAPOUR DENSITY (ART - 1)  OENSITÉ DE VAPEUR (ART - 1)  N/AV
EVAPORATION RATE/ TAUX DEVAPORATION \$10W	FOR DEBALLION TO 140-166	FREEZING POINT (C) POINT DE CONDELAKON (C) N/AP	SOCIEDIA MANIENEACO NIT
WILLIAM 22.7	n/ap	· ·	COEFFICIENT DE VALER DE DISTREBUTIONS COOFFICIENT DE REPARTITION EQUIPLES NAV

SECTION IV — FIRE AND EXPLOSION HAZARD OF	F MATERIAL / RISQUES D'INCENE	DIE ET D'EXPLOSION DU MATÉRIEL
PLANSMERTY/PELANGABUTE 12 VERIOUS 1 HO/HON F YES, UNDER WHICH CONDITIONS 7 SPAI	RKS, FLAME, EXTREME 1	TEAT.
MEANS OF EXTRICTION AND YEAR O'EXTRICTION		_
WATER FOG. CO2. DRY CHEMICAL, FO.	AM .	•
MOVED AND TRRITARING GASES MAY BE	WATER TO COOL SURROU PRESENT. ELIMINATE	G APPARATUS SHOULD BE NDING DRUMS AND AREA. SPARKS, ELECTRICITY, VEL SOME DISTANCE AND
PLABFORT TO MO METICO/FORT DECLAR TO ET METHODE DE DETERMATION 45 SETAFLASH	SELEC WASHING DIRECTOR IN THE THE PART VOLUMES	SELECT PRIMARY DISELFURING LICE LES LAND ACCTIVATES  (COLLEGE EXALOSION FINEL LES BA ACCTIVATES)
мложном так очные сутаномине очно не очных он (с) 354		PRODUIS COMBUSTION PRODUCTS PRODUIS DE COMBUSTION DINGERS MASSES, SMOKE
EXPLOSION DATA	A/DONNÉES SUR L'EXPLOSIBILIT	É
ESPERITIVITY TO MECHANICAL IMPACT/SENSERITE AUX CHOCS	SPAV	EREMINITE AUX DECHARIOS ELECTROS VATIONES
SECTION V — REACTIVITY DATA / DONNÉES S		
PROMPATIBLITY TO COMEN SUBSTANCES THIS PRODUCT PROGRAMMY AND UNDER WAS CONDITIONS PRODUCT OANS CURLES CONDITION OF THE COME COME COME COME COME COME COME COM	ONTAINING MATERIAL AL 3487	
SECTION VI — TOXICOLOGICAL PHOPERTIES	OF MATERIAL PROPERTY	07110-012-012-013-01-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
Called Strategic Strategic College actions to a series and a series	Mark a straight and a section as a second section of the second	E ROBBION
SKIN CONTACT - CAN CAUSE REDNES INHALATION - MAY IRRITATE NOSE EYE CONTACT - LIQUID AND MIST M INGESTION - MAY CAUSE NAUSEA AN  OFFICIA OF CHARGE EXPOSURE TO MATERIAL EFFETS DE L'EXPOSITION CHARGE PROLONGED OVER EXPOSURE MAY LES MAY INJURE LUNGS, BLOOD AND NEF SKIN - DERMATITIS.	S AND IRRITATION. AND THROAT AND CAUSE ANY CAUSE IRRITATION D VOMITING.  COMMANDAMENTE AND TO DELAYED LIVER OF	AND REDNESS.

### MATERIAL NAME/IDENTIFIER URETHANE BASE, Yellow, 4600-Y-9 NOM/IDENTIFICATION DE LA MATIÈRE 🚩 LO\_ OF MATERIAL SEPECIFY SPECIES & POUTE) LO\_ DE LA MATERIE PRÉCIER L'EXPECE ET LA VOIE D'ADMINISTRATION TC" OF INVESTME SAECREL FEBRECE ET I'VARE GADWARRIMATION ... NOT ESTABLISHED NOT ESTABLISHED ENFORME KINETSPLEATES O'EXPOSITION SYNIANCY OF MATERIALIPROPRIETE SPRIMITE DE LA MATIÈRE SEE PAGE 4 NOT ESTABLISHED BENETTEATON OF MATERIALISENSBURGITON & LA MATIÈRE STREPGESTIC MATERIALS/MATERIES STREPGESTES N/AV N/AV CANCENCIANO, REPRODUCTIVE EFFECTS, TERATOGENICITY, MUTAGENICITY/CANCEROGENICITE, SEPETS NOCES SUR LA REPRODUCTION, TERATOGENICITE, MUTAGENICITE LEAD CHROMATE LISTED AS GROUP 2B IARC

APPENDIX A.2 ACGIH

SECTION VII - PREVENTIVES MEASURES / MESURES PRÉVENTIVES

PERSONAL PROTECTIVE EQUIPMENT/MATÉRIEL PERSONNEL DE PROTECTION

OLOVES (SPECIFY) OMITS STRECKED

EYE (SPECIFY)/YEUX (PRECISION

CHEMICAL RESISTANT GLOVES

GOGGLES OR SAFETY GLASSES

RESPIRATORY (SPECIFY) APPAREA, RESPIRATORS (PRECISER)

RESPIRATOR APPROVED FOR ORGANIC VAPOUR.

OBSERVE OSHA REGULATIONS FOR RESPIRATOR USE (29CFR 1910.134)

OTHER (SPECIFY) ALITYES (PRECISER)

SAFETY SHOWERS AND EYE WASH STATIONS SHOULD BE AVAILABLE. EDUCATE EMPLOYEES IN SAFE USE OF MATERIALS.

ENGINEERING CONTROLS (E.G. YENTEATON, ENCLOSED PROCESS, SPECIFY/MECANISHES TECHNOLIES (EX. VENTRATION, OPERATION ON MILEU FERME, PRECEDING

VENTILATE TO KEEP AIR CONCENTRATIONS BELOW 100 PPM FOR PMA.

LEAK AND BPILL PROCEDURE/MERAPES EN CAR DE PUTE OU DE DEVERSOMENT

COVER WITH ABSORBENT MATERIAL, i.e. SAND, DIATOMACEOUS EARTH OR SWEEPING COMPOUND.

COLLECT AND HANDLE AS NORMAL WASTE.

WHATE DISPOSAL/ELMINATION DES RESIDUS

WASTE MAY BE INCINERATED OR DISPOSED OF IN COMPLIANCE WITH LOCAL, PROVINCIAL AND FEDERAL ENVIRONMENT CONTROL REGULATIONS.

IMMOLING PROCEDURES AND EQUIPMENTE/METHODES ST EQUIPMENT POUR LA MANUTENTION

MATERIAL IS HYDROSCOPIC.

STORAGE REQUIREMENTS/EXCENCES DENTREPOSAGE

KEEP CONTAINERS TIGHTLY CLOSED.

STORAGE TEMPERATURE RANGE 0°C (32°F.) to 50°C (122°F.)

EFECAL SHIPPING EFFORMATION/PENSERNIBHENTS OFFICIALLY POUR L'EXPÉRTION

FLAMMABLE LIQUID

INHALATION - GET TO FRESH AIR. IF BREATHING STOPPED GIVE ARTIFICIAL .

SKIN CONTACT - REMOVE CONTAMINATED CLOTHING. WASH WITH SOAP AND WATER. IF IRRITATION PERSISTS GET MEDICAL ATTENTION.

EYE CONTACT - RINSE 15 MINUTES WITH RUNNING WATER. LIFT LID. \*

INGESTION - DO NOT INDUCE VOMITING. \*

\* GET MEDICAL ATTENTION IMMEDIATELY.

ADDITIONAL RECEMATION/RESERVACIMENTS SUPPLEMENTAINES

REFER TO MSDS BY MOBAY AND BAYER FOR POLYESTERS.

### SECTION IX - PREPARATION DATE OF M.S.D.S. / FICHE SIGNALÉTIQUE

PREPARED BY (GROUP, DEPARTMENT, ETC.) PROPARE PAR (GROUPE, DEPARTEMENT, ETC.)		
H. BOYD MOORE	TELEPHONE MUNIBERNY DE TELEPHONE	DATE
WHMIS CO-ORDINATOR	416-746-2233	2/1/89
ADDITIONAL NOTES OR REFERENCES/NOTES ADDITIONNELLES OU DE		

ADDITIONAL NOTES OR REFERENCE EXPOSURE LIMITS	ES/NOTES /	ADDITIONNELLES QU RÉFÉRI	INCES: AC	GIH (88-89)
	Twa PPM	Mg/Cu M	STE: PPM	
Lead Chromate	N/AV	0-15 (as Pb) 0-05 (as Cr)	N/AV	n/av
Polyester Polyols	N/AP	N/AP	N/AP	
Propylene Glycol Mono Methyl Ether Acetate	100	360	150	N/AP 540
2.4 Pentanedione 2-Ethoxy Ethyl Acetate	n/av 5	N/AV .	N/AV	n/av
Lead Sulfate	N/AV	0.15 (as Pb) 0.05 (as Cr)	n/av n/av	n/av n/av

### TEMIS CLASSIFICATION:

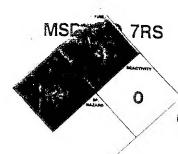
"LAMMABILITY: CLASS B. DIVISION 2, FLAMMABLE LIQUID

LTH: CLASS D. DIVISION II. SUB-DIVISION B. TOXIC MATERIAL

### ISCLAIMER

HE INFORMATION CONTAINED HEREIN IS BASED ON DATA AVAILABLE TO US AND IS ELIEVED TO BE CORRECT. HOWEVER "TEMPO PAINT AND VARNISH COMPANY" MAKES O WARRANTY, EXPRESSED OR IMPLIED, REGARDING THE ACCURACY OR COMPLETENESS F THIS INFORMATION OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

/AP - NOT APPLICABLE /AV ~ NOT AVAILABLE





April 15, 1987

### IMRON® POLYURETHANE ENAMEL

### Section N/

Manufacturer

E. I. du Pont de Nemours & Co. (Inc.) Automotive Products Department Wilmington, Delaware 19898

Telephone: Product information (800) 441-7515 Medical emergency (800) 441-3637 Transportation emergency (800) 424-9300

(CHEMTREC)

Product: Imron Polyurethane Enamel D.O.T. Hazard Class: Flammable Liquid Paint UN 1263

Hazardous Materials Identification System: H = 2, F = 3, R = 0.

### Section II — Hazardous Ingredients (See Section X for ingredients listed by product code)

	Ingredients 1. Methyl ethyl	CAS No.	Vapor Pressure (20°C mm Hg.)	Exposure Limits*
	ketone	78-93-3	71	200ppm-A,0;
	2. Toluene	108-88-3	36.7	300ppm-A-(STEL) 100ppm-A; 200ppm-O; 150ppm-A-(STEL); 300ppm-O-C
444	Ethyl acetate     Propylene     glycol     monomethyl	141-78-6	76	400ppm-A,0
	ether acetate 5. Xylene	108-65-6 1330-20-7	3,8 25	Unknown 100ppm-A.O;
	6. VM&P napntha	64742-89-8	15	150ppm-A-(STEL) 100ppm-D: 300ppm-A 500ppm-O
	7. Chrome antimony Ptanate	None	None	0.5mg m³-A
	8. Aluminum 9. Carbon black 10. Lead chromate	7429-90-5 1333-86-4	None None	0-Sb 10mg/m³-A 3.5mg/m³-A,0
	molypdate	12656-85-8	None	150µg/m³-A; 50µg/m³-A; 50µg/m³-0-Pb; 100µg/m²-0-Cr
	11. Lead chromate.	18454-12-1	None	150µg mi-A; 50µg/mi-A; 50µg/mi-O-Pb; 100µg/mi-O-Cr
	12. Nickel. antimony. titanium yellow			тооду, по-го-ог
	pigment	8007-18-9	None	0.5mg/m³-A, C-SB
	13. Titanıum gioxide	13463-67-7	None	10.0mg/m³-A: 15 mg/m²-0

	Other pigments Polymeric	None	None	10mg/m³-A
16.	resins Butyl acetate	None 123-86-4	None 8	10mg/m³-A 150ppm-A.O;
17.	N-butyl alcohol	71-36-3	5.5	200ppm-A-(STÉL) 100ppm-0; 25ppm-D; 50ppm-C-A
18.	Aromatic hydrocarbons	64742-95-6	10	25ppm-0;
19.	Medium mineral spirits	64742-88-7	10	50ppm-D 100ppm-A.D; 500ppm-0

\*A = ACGIH TLV, O = OSHA, D = Du Pont internal limit, S = Supplier Furnished Limit, STEL = Short Term Exposure Limit (15 min.), C = Ceiling

### Section III - Physical Data

The state of the s	
Evaporation rate: Slower than ether	Gal. Wt. (#/gal): 8.25-11.19
Solubility in water: Miscible Vapor Density: Heavier than air Boiling Range: 76°F-155°F	Volume % Volatile: 60.6-69.4% Weight % Volatile: 42.8-63.6% V.O.C. (#/gal): 3.5-6.0
-	

### Section IV — Fire & Explosion Data

Flash point (Closed cup): 73-100°F Approx. flammable limits: 1.0-13.1%.

Extinguishing media: Water spray, foam, carbon dioxide, dry chemical

Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to cool closed containers to prevent pressure build up.

Unusual fire & explosion hazards: When heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point.

### Section V - Health Hazard Data

### General effects

Ingestion: Gastro-intestinal distress.

In the unlikely event of ingestion, call a physician immediately and have names of ingredients available.

Inhalation: May cause nose and throat irritation. Repeated and prolonged overexposure to solvents may lead to permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are signs that solvent levels are too high. This product cannot be applied satisfactorily without the addition of an activator which contains an isocyanate. Exposure to the isocyanate may cause asthma-like reactions with shortness of breath, wheezing, cough or lung sensitization. This effect may be delayed for several hours after exposure. Individuals with lung or breathing problems or prior reaction to isocyanates must not be exposed to the vapors or spray mist. If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult a physician.

Skin or eye contact: May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis.

In case of eye contact, immediately flush with plenty of water for at least 15 minutes: call a physician.

### Section V — Health Hazard Data — Continued

In case of skin contact, wash with soap and water. If irritation occurs, contact a physician,

Specific effects

Methyl Ethyl Ketone: High concentrations have caused embryotoxic effects in laboratory animals. Methyl Ethyl Ketone (MEK) has been demonstrated to potentiate (i.e., shorten the time of onset) the penpheral neuropathy caused by either N-Hexane or Methyl N-Butyl Ketone. MEK by itself has not been demonstrated to cause peripheral neuropathy. Liquid splashes in the eye may result in chemical burns. *Toluene*: Recurrent overexposure may result in liver and kidney injury. High airborne levels have produced irregular heart beats in animals and occasional palpitations in humans. Rats exposed to very high airborne levels have exhibited high frequency hearing deficits. The significance of this to man is unknown. Ethyl Acetate: Prolonged and repeated high exposures of laboratory animals resulted in secondary anemia with an increase in white blood cells; fatty degeneration, cloudy swelling and an excess of blood in various organs. Propylene Glycol Monomethyl Ether Acetate: May cause moderate eye burning. Recurrent overexposure may result in liver and kidney injury. Xylene: high concentrations have caused embryotoxic effects in laboratory animals. Recurrent overexposure may result in liver and kidney injury. Can be absorbed through the skin in harmful amounts. VM&P Naphtha and Medium Mineral Spirits: Laboratory studies with rats have shown that petroleum distillates cause kidney damage and kidney or liver tumors. These effects were not seen in similar studies with guinea pigs, dogs, or monkeys. Several studies evaluating petroleum workers have not shown significant increases of kidney damage nor kidney or liver tumors. Chrome Antimony Titanate, Nickel, Antimony, Titanium Yellow Pigment: Antimony, nickel and chromium are incorporated into the crystal structure of titanium dioxide. As such they are chemically and biologically inert. Lead Chromate Molybdate, Lead Chromate and Lead: Overexposure to lead may cause adverse effects to the blood forming, nervous, unnary, reproductive systems including embryotoxic effects. Symptoms may include loss of appetite, anemia, disturbance of sleep and fatigue. See OSHA Lead Standard 29CRF1910.1025 for exposures longer than 8 hours. The OSHA exposure limit is reduced by this formula: Limit (in  $\mu g/m^3$ ) = 400/hours worked in the day. These pigments are NTP carcinogens. Lead can be absorbed through the skin in harmful amounts. Titanium Dioxide: In a lifetime inhalation test, lung cancers were found in some rats exposed to 250 mg/m³ respirable titanium dust. Analysis of the titanium dioxide concentrations in the rats' lungs showed that the lung clearance mechanism was overwhelmed and that the results at the massive 250 mg/m³ level are not relevant to the workplace. Butyl Acetate: Extremely high concentrations have caused blood changes and weakness in laboratory animals. N-Butyl Alcohol: Liquid splashes in the eye may result in chemical burns.

### Section VI - Reactivity Data

Stability: stable

Incompatibility (materials to avoid): none reasonably foreseeable Hazardous decomposition products: CO, CO<sub>2</sub>, smoke, oxides of heavy metals reported in Section II Hazardous polymerization: will not occur

### Section VII - Spill or Leak Procedures

Steps to be taken in case material is released or spilled: Ventilate area. Remove sources of ignition. Prevent skin contact and breathing of vapor. Wear a properly fitted vapor/particulate respirator (NIOSH/MSHA TC-23C). If the material has been activated with an isocyanate, wear a positive pressure supplied

air respirator (NIOSH/MSHA TC-19C).
Confine and remove with inert absorbant.
Deactivate isocyanate containing spills with:
20% Surfactant (Tergitol TMN-10)
80% Water
or
0-10% Ammonia
2-5% Detergent

Water disposal method: Do not allow material to contaminate ground water systems. Incinerate absorbed material in accordance with federal, state, and local requirements. Do not incinerate in closed containers.

### Section VIII — Special Protection Information

Respiratory: Do not breathe vapors or mists.

Balance Water

Wear a positive pressure, supplied-air respirator (NIOSH/MSHA TC-19C) while mixing activator with enamel, during application and until all vapors and spray mists are exhausted. Individuals with a history of lung or breathing problems or pnor reaction to isocyanate should not use or be exposed to this product when activated. Do not permit anyone without protection in the painting area. Follow the respirator manufacturer's directions for respirator use.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective clothing: Neoprene gloves and coveralls are recommended.

Eye protection: Desirable in all industrial situations, include splash guards or side shields.

### Section IX — Special Precautions

Precautions to be taken in handling and storing: Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120°F.

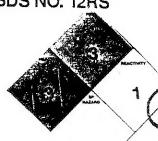
Other precautions: Do not sand, flame cut, braze or weld dry coating without a NIOSH/MSHA approved respirator or appropriate ventialtion.

### Section X — Hazardous Ingredients by Product Code

Product Code	Ingredients
520U, 521U, 522U, 523U	(See Section II) 4, 8, 15, 16, 17, 18,
532U	19 2, 3, 4, 5, 9, 12, 13,
533U 534U, 539U, 540U, 541U, 543U, 544U, 555 531U, 535U 536U, 553U, 554U, 556U, 557U, 559U, 561U, 562U, 566U, 567U 537U 547U 548U	14, 15 2, 3, 4, 5, 9, 13, 14, 15 U 2, 3, 4, 5, 13, 14, 15 2, 3, 4, 5, 9, 15 2, 3, 4, 5, 9, 14, 15 2, 3, 4, 5, 7, 13, 14, 15 2, 3, 4, 5, 9, 10, 15 2, 3, 4, 5, 9, 10, 15
550U 552U, 558U 560U 563U, 564U 565U 571U, 572U	13, 14, 15 2, 3, 4, 5, 6, 8, 15 2, 3, 4, 5, 14, 15 2, 3, 4, 5, 9, 10, 11, 15 1, 2, 3, 4, 5, 6, 14, 15 2, 3, 4, 5, 6, 9, 14, 15 2, 3, 4, 6, 15

Notice: The data in this material safety data sheet relate only to the specific material designated herein and do not relate to use in combination with any other material or in any process.

Product Manager Refinish Sales MSDS NO. 12RS



### MATERIAL SAFETY DATA SHEET



April 15, 1987

### ISOCYANATE ACTIVATORS, HARDENERS AND ADDITIVES

Section I

Manufacturer

E. I. du Pont de Nemours & Co. (Inc.) Automotive Products Department Wilmington, Delaware 19898

Telephone: Product information (800) 441-7515 Medical emergency (800) 441-3637 Transportation emergency (800) 424-9300

(CHEMTREC)

Product: 77S, 192S, 195S, 355S, 582S, 782S, 792S, 793S,

VG-Y-1421

D.O.T. Hazard Class: Flammable Liquid

Driers, paint, liquid N.O.S. UN 1168

Hazardous Materials Identification System:

H = 3, F = 3, R = 1.

### Section II — Hazardous Ingredients (See Section X for ingredients listed by product code)

1.	Ingredients Butyl acetate	CAS Number 123-86-4	Vapor Pressure (20°C mm Hg.) 8	Exposure Limits* 150ppm-A, O;
2.	Toluene	108-88-3	36.7	200ppm-A-(STEL) 100ppm-A; 200ppm-O; 150ppm-A-(STEL); 300ppm-O-C
3.	Diethylene glycol monobutyl			33355111 3 3
1	ether Trixylenyl	112-34-5	0.1	5.0ppm-D
5.	phosphate Ethyl acetate Aromatic hy-	25155-23-1 141-78-6	1 76	Unknown 400ppm-A,O
7	drocarbons Light stabilizer 1.6 Hexa- methylene	64742-95-6 None	10 Unknown	25ppm-0; 50ppm-D 0.1mg/m³-S
	disocyanate	822-06-0	Unknown	5.0 ppb-A,D; 20 ppb-C,S
	Aliphatic polyiso- cyanate Polymeric	28182-81-2	None	1.0mg/m³-S
	isophorone diisocyanate	None	None	4 9

"A=ACGIH TLV, O=OSHA. D=Du Pont internal limit, S=Supplier Furnished Limit, STEL=Short Term Exposure Limit (15 mins.), C=Ceiling

\*Free Isopnorone Diisocyanate monomer is less than 0.7% by weight. Exposure limits are 0.01 ppm-A for the monomer.

### Section III - Physical Data

Evaporation rate: Slower than etner Gal. wt. (#/gal): 8.07-9.10 Solubility in water: Miscible Vapor density: Heavier than air Boiling range: 76-472°F

Volume % volatile: 25.9-71.6% Weight % volatile: 21.2-66.0% V.O.C. (#/gai): 1.7-5.5

### Section IV — Fire & Explosion Data

Flash point (Closed cup): 73-100°F Approx. flammable limits: 0.9-11.2% Extinguishing media: Water spray, foam, carbon dioxide, dry chemical

Special fire fighting procedures: Full protective equipment, including self-contained breathing apparatus, is recommended. Water from fog nozzles may be used to cool closed containers to prevent pressure build up.

Unusual fire & explosion hazards: When heated above the flash point, emits flammable vapors which, when mixed with air, can burn or be explosive. Fine mists or sprays may be flammable at temperatures below the flash point,

### Section V - Health Hazard Data

General effects

Ingestion: Gastro-intestinal distress.

In the unlikely event of ingestion, call a physician immediately

and have names of ingredients available.

Inhalation: May cause nose and throat irritation. Repeated and prolonged overexposure to solvents may lead to permanent brain and nervous system damage. Eye watering, headaches, nausea, dizziness and loss of coordination are signs that solvent levels are too high. Exposure to isocyanates may cause asthma-like reactions with shortness of breath, wheezing, cough or lung sensitization. This effect may be delayed for several hours after exposure. Individuals with lung or breathing problems or prior reaction to isocyanates must not be exposed to vapors or spray mist of this product.

If affected by inhalation of vapor or spray mist, remove to fresh air. If breathing difficulty persists, or occurs later, consult

a physician.

Skin or eye contact: May cause irritation or burning of the eyes. Repeated or prolonged liquid contact may cause skin irritation with discomfort and dermatitis. In case of eye contact, immediately flush with plenty of water

for at least 15 minutes; call a physician.

in case of skin contact, wash with soap and water. If irritation occurs, contact a physician.

Specific effects

Butvi Acetate: Extremely high concentrations have caused blood changes and weakness in laboratory animals. Toulene: Recurrent overexposure may result in liver and kidney injury. High airborne levels have produced irregular heart beats in animals and occasional palpitations in humans. Rats exposed to very high airborne levels have exhibited high frequency hearing. deficits. The significance of this to man is unknown. Diethylene Glycol Monobutyl Ether: Contact may cause skin irritation with discomfort or rash. Extremely high concentrations have caused empryotoxic effects in laboratory animals. May cause apnormal kioney function. High doses in laboratory animals have shown non-specific effects such as irritation, weight loss, moderate blood changes. Tests for mutagenic activity in bacterial or mammalian cell cultures have been inconclusive. Trixylenyl Phosphate: Has produced delayed neurotoxicity via oral and dermai routes in studies on the nen. Ethyl Acetate: Prolonged and repeated high exposures of laboratory animals resulted in secondary anemia with an increase in white blood cells; fatty degeneration, cloudy swelling and an excess of blood in various organs. Light Stabilizer: Causes severe eye irritation. Contact may cause skin irritation with discomfort or rash.

1.6 Hexametriylene Diisocyanate: May cause temporary upper accenoriness of creatn. Overexpos. A may cause astnma-like

### Section V — Health Hazard Data — Continued

reactions with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Prolonged skin contact may cause chemical burns. Liquid splashes in the eye may result in chemical burns. Individuals with preexisting lung disease, asthma or breathing difficulties may have increased susceptibility to the toxicity of excessive exposures. Aliphatic Polyisocyanate or Polymeric Isophorone Diisocyanate: Repeated exposure may cause allergic skin rash, itching, swelling. Overexposure may cause asthma-like reactions with shortness of breath, wheezing, cough or permanent lung sensitization. This effect may be delayed for several hours after exposure. Individuals with preexisting lung disease, asthma, or breathing difficulties may have increased susceptibility to the toxicity of excessive exposures.

### Section VI — Reactivity Data

Stability: Stable

Incompatibility (materials to avoid): none reasonably foreseeable Hazardous decomposition products: CO, CO<sub>2</sub>, smoke

Hazardous polymenzation: will not occur

### Section VII — Spill or Leak Procedures

Steps to be taken in case material is released or spilled: Do not breathe vapors. Do not get in eyes or on skin. Wear a positive pressure supplied air vapor/particulate respirator (NIOSH/MSHA TC-19C), eye protection, gloves and protective clothing. Remove sources of ignition. Absorb with inert material. Ventilate area. Pour liquid decontaminate solution over the spill and allow to sit 10 minutes, minimum. Typical decontamination solutions are:

20% Surfactant (Tergitol TMN 10)

80% Water

or

0-10% Ammonia

2-5% Detergent

Balance water

Waste disposal method: Do not allow material to contaminate ground water systems. Incinerate absorbed material in accordance with federal, state, and local requirements. Do not

incinerate in closed containers.

### Section VIII — Special Protection Information

Respiratory: Do not breathe vapors or mists.

Wear a positive pressure supplied air respirator (NIOSH/MSHA TC-19C) while mixing activator with any paint or clear enamel, during application and until all vapors and spray mists are exhausted, individuals with a history of lung or breathing problems or prior reaction to isocyanate should not use or be exposed to this product. Do not permit anyone without protection in the painting area. Follow the respirator manufacturer's directions for respirator use.

Ventilation: Provide sufficient ventilation in volume and pattern to keep contaminants below applicable OSHA requirements.

Protective clothing: Neoprene gloves and coveralls are recommended.

Eye protection: Desirable in all industrial situations. Include splash guards or side shields.

### Section IX — Special Precautions

Precautions to be taken in handling and storing: Observe label precautions. Keep away from heat, sparks and flame. Close container after each use. Ground containers when pouring. Wash thoroughly after handling and before eating or smoking. Do not store above 120°F.

Other precautions: Do not sand, flame cut, braze or weld dry coating without a NIOSH/MSHA approved respirator or appropriate ventilation.

### Section X — Hazardous Ingredients by Product Code

Product Code	(See Section ii)
192S, 195S, 582S, 782S	1, 5, 6, 8, 9
355S	1, 2, 3, 5, 6, 7, 8, 9
7935	1, 2, 3, 4, 5, 6, 7, 8, 9
VG-Y-1421	1, 6, 8, 9
77S 2000S — Part B	1, 2, 6, 10
20000 Fait b	1, 2, 6, 8, 9

Notice: The data in this material safety data sheet relate only to the specific material designated herein and do not relate to use in combination with any other material or in any process.

Product Manager Refinish Sales